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INTERNATIONAL UNION OF AMERICAN REPUBLICS

BULLETIN
OF THE INTERNATIONAL UNION OF THE
AMERICAN
REPUBLICS

VOL. XXX

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JANUARY-MARCH, 1910



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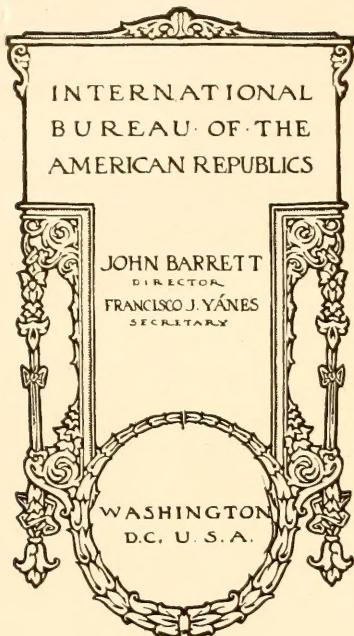
JANUARY

1910



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SOUTH AMERICA.

Isidore Konti, the sculptor of this group to be placed in front of the new building of the International Bureau of the American Republics at Washington, has fittingly typified the spirit of the southern half of the Western Continent. The woman's figure, of heroic size, crowned by the condor of the Andes, symbolizes wisdom, protection, and peace accorded to the spirit of progress expressed in the figure of youth at her side, holding in his outstretched hand the winged globe of advancement. One arm of the central figure is flung protectingly around the youth and the other rests upon a warlike shield, though the hand bears an olive branch. The lineaments of the two faces follow the characteristic Latin outlines and in the palm branches and the parrot are shown the representative flora and fauna of South America.

BULLETIN

OF THE INTERNATIONAL BUREAU

OF THE AMERICAN REPUBLICS



VOL. XXX.

JANUARY, 1910.

NO. 1.

WITH this issue the BULLETIN appears in a new and more attractive cover. The change is simply another step in the DIRECTOR's general plan for improving the appearance as well as the material of this publication. When comparison of this issue in both character of contents and quality of typography is made with the January issue of 1907, it can be seen at a glance that it is worth the trouble and effort to present in a pleasing form information and data which would otherwise be left unread except by a few investigators and special students. As a result of making the BULLETIN a dignified magazine, its circulation among the class of readers whose influence counts for the advancement of Pan-American commerce and comity has increased to such proportions that it is almost impossible to meet the demand for it. The hundreds of letters which reach the Bureau from all parts of North and South America commanding the improvement in the BULLETIN encourage the DIRECTOR to continue in the effort to make it not only interesting and instructive but gratifying to the artistic sense. The comparatively small amount of money available for its printing necessarily precludes many changes and improvements that could be attempted if it possessed the abundance of funds which private publications have at their disposal. Being semi-official in its character, it is not permitted to publish advertisements, which are the chief source of income of most magazines. Were it not that most of its pictures are contributed by various Governments or persons, it would be impossible to brighten its pages with the illustrations which are so generally appreciated. The BULLETIN wishes its readers a Happy New Year, and invokes their cooperation in making 1910 a record period for the growth of Pan-American trade, friendship, and good will.

PRESIDENT TAFT'S VIEWS ON THE INTERNATIONAL BUREAU.

The attention of all persons who are interested in the practical work of the International Bureau of the American Republics and in knowing that

its efforts are appreciated in the highest circles is invited to the following quotation from the Message of President TAFT, delivered to the United States Congress Tuesday, December 7, 1909:

The International Bureau of the American Republics has carried on an important and increasing work during the last year. In the exercise of its peculiar functions as an international agency, maintained by all the American Republics for the development of Pan-American commerce and friendship, it has accomplished a great practical good, which could be done in the same way by no individual department or bureau of one government, and is therefore deserving of your liberal support. The fact that it is about to enter a new building, erected through the munificence of an American philanthropist and the contributions of all the American nations, where both its efficiency of administration and expense of maintenance will naturally be much augmented, further entitles it to special consideration.

THE OPINION OF THE EXPORTERS REVIEW.

In a recent issue of the "Exporters Review," a representative trade paper of New York City, there appeared an editorial entitled "Fosters Latin-American Commerce," which is quoted in part below:

The International Bureau of American Republics is an institution that has done much to foster American trade with our Latin-American cousins. We know, from the many letters we receive from our subscribers, that there is proportionately more interest taken in the expansion of our trade with South and Central America than with any other section of the globe, and the information which manufacturers and merchants obtain from the Bureau of American Republics has helped many of them materially to obtain a market for their goods. The *MONTHLY BULLETIN*, issued by the Bureau, is replete with information from authoritative sources on the various activities going on in these growing countries south of us. The Hon. JOHN BARRETT, Director of the Bureau, has probably a more intimate knowledge of the customs and business methods in Latin America than any American official living, as he has spent many years in the diplomatic service of the United States in those countries. Our subscribers are invited to make use of the facilities of the Bureau, which are at the disposal of any American manufacturer with a legitimate interest in Spanish-American matters.

VENEZUELA HONORS THE DIRECTOR.

The Government of Venezuela, through its distinguished representative in Washington, Dr. P. EZEQUIEL ROJAS, has presented to Mr. JOHN BARRETT, the Director of the International Bureau of the American Republics, the decoration of the Second Class of the Order of the Bust of Bolivar, in recognition of the Director's efforts to develop closer relations of commerce and friendship among the American Republics. The First Class of this decoration is conferred exclusively on chiefs of States. The order has special distinction in that it is the only one given by an American Republic.



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DECORATION OF THE ORDER OF THE BUST OF BOLIVAR.

Conferred by the Government of Venezuela on Honorable John Barrett, the Director of the International Bureau of the American Republics, in recognition of his efforts in developing closer relations of commerce among the American Republics.

A NEW YORK VIEW OF LATIN-AMERICAN TRADE.

An editorial in the Tuesday (November 30) issue of the "New York Sun," which has always given much attention to Latin-American affairs, contained an interesting statement in regard to the commerce and trade of that part of the world, which is quoted below:

As a market for our products, the countries to the southward are demonstrably of greater present value to us and probably more promising as markets in the immediate future than are the countries across the Pacific Ocean.

The commercial value of Latin America as measured by its imports is now about \$1,000,000,000 a year. That figure was reached in 1907. The world-wide commercial depression reduced the total to \$900,000,000 in 1908. The present century opened with imports of about \$500,000,000. On a basis of the average imports for the years 1907 and 1908 the Latin American increase alone since 1899 is about 85 per cent of the total imports of China, Japan, Hongkong, Korea, and Manchuria. In total value the imports of Latin America are nearly double those of the combined imports of the countries of the Asiatic coast north of the twentieth parallel of latitude. This shows the present value of the respective markets. In pace of commercial development during recent years Latin America has outstripped the Orient. In volume of increase our neighbors lead in a proportion of about 2 to 1.

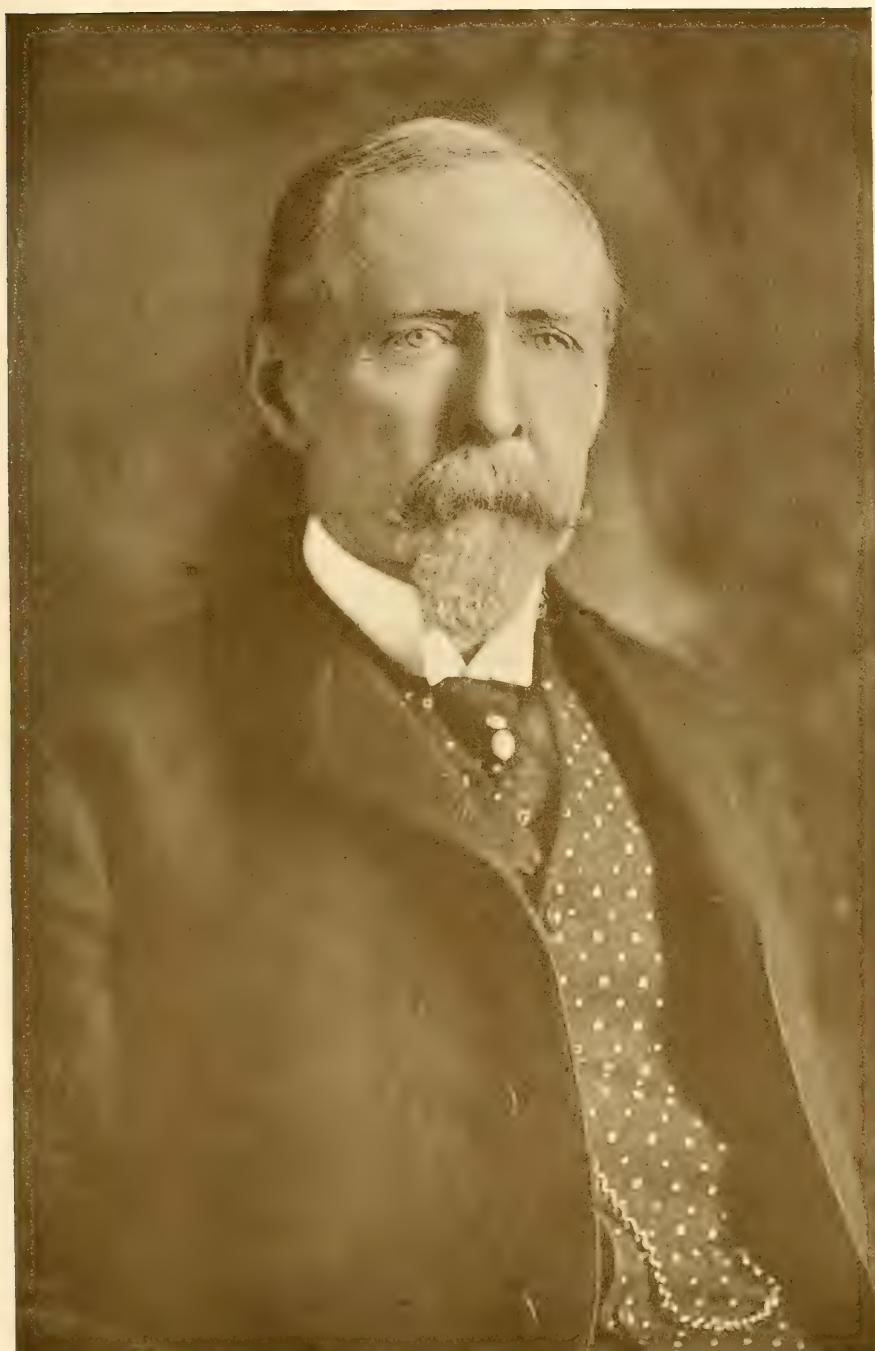
The percentage of increase in imports by some of the leading nations in the respective regions in the last ten years is shown in this table:

LATIN AMERICA.	THE ORIENT.
Argentine Repùblic-----	154 China-----
Brazil-----	75 Japan-----
Chile-----	161
Mexico-----	153

It is probable that the next ten years will repeat the experience of the ten-year period now closing. China and Japan will increase their purchases, but there is little or no good reason for belief that the increase will be as rapid or as great as the increase in Latin America.

THE SECOND ASSISTANT SECRETARY OF STATE OF THE UNITED STATES OF AMERICA.

ALVEY AUGUSTUS ADEF, who has been Second Assistant Secretary of State since August 3, 1886, was born at Astoria, New York, November 27, 1842, being the son of AUGUST A. ADEF, fleet surgeon, U. S. Navy. He received a private school education and was appointed secretary of legation at Madrid, September 9, 1870, where he also served as chargé d'affaires at various times. He was transferred from Madrid and appointed as clerk "Class IV" in the State Department in 1877, and Chief of the Diplomatic Bureau in 1878; was promoted to Third Assistant Secretary of State in 1882, and to his present position in 1886. Mr. ADEF was present at the signing of the peace protocols between the United States and Spain. He was appointed Secretary of State *ad interim* to fill a vacancy from September 17 to 29, 1898, and was Acting



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HON. ALVEY A. ADEE,
Second Assistant Secretary of State of the United States of America.

Secretary of State during a critical period of the Chinese troubles in August and September, 1900. He is a fine linguist and has been honored by the University of Yale with the degree of Master of Arts.

PROGRESS OF THE NEW BUILDING.

In answer to the frequent question: "When will the new building of the International Bureau be ready for dedication?" the Director begs to reply that the date is not yet settled, but it is hoped that this celebration may take place some time in March. Progress toward completion of the building seems to be going forward as fast as possible, but there are a thousand and one details connected with the finishing touches which can not be hurried without injury to its permanent appearance. Although much disappointment has been felt that the new home of the Bureau could not be ready for occupancy at the beginning of the year, it must be remembered that a structure which is to stand for all time and be a monument of international commerce, peace, and good will should have in its finish no evidence of hasty or temporary work. It is gratifying to hear from all sides expressions of appreciation at the beauty of the structure and of the excellence of its location, commanding the entrance to Potomac Park. Nearly every person who has carefully inspected the building, inside and out, in its present unfinished condition, is pleased with its architecture and general plan.

THE LONDON TIMES AND LATIN AMERICA.

The London Times for November 15, 1909, announces the publication in December of a "special" number dealing with the South American Continent. It is designed to cover in this publication an account of the constitutions of the various Republics, their armies and navies, their fiscal policies, resources, and development. The principal cities of the countries will be described and the opportunities for foreigners desirous of establishing business connections will be fully detailed. This number will be translated into Spanish and Portuguese for circulation throughout the countries speaking those languages. The announcement adds that "this is the most unique opportunity ever offered for increasing foreign trade, and British manufacturers are urged to take advantage of it." While this may be the first effort of the kind made by Great Britain, it is but just to state that the preparation and publication of such data in the languages of the countries treated have occupied the International Bureau for many years, and with flattering results. The Director of the International Bureau has been asked by the management of the "Times" to prepare a general article on Latin America as introductory to the series described above.

INTEREST OF COMMERCIAL ORGANIZATIONS IN LATIN AMERICA.

In every important commercial gathering which is now held in the United States there is some consideration being given to the countries of Latin America. This was not true a few years ago, and it indicates a remarkable growth of interest among the representative business men of the United States in the trade and material development of a part of the world to which they have given little attention heretofore. The Director is constantly receiving invitations to address the conventions of these organizations, but regrets that he can accept only a few of them because of the demands made upon him by the administration of the Bureau. At the great Lakes-to-the-Gulf Deep Waterways gathering in New Orleans, October 30–November 3, attended by the President, the trade of Latin America was a feature of the programme, as it was also of the annual convention of the Atlantic Deeper Waterways Association, held at Norfolk, Va., November 17–20; of the Southern Commercial Congress, held at Washington, D. C., December 6 and 7; and of the National Rivers and Harbors Congress, also held in Washington, D. C., December 8–10. On December 17, in response to the invitation of the Chamber of Commerce of the city of Toledo, extended by its efficient secretary, A. E. ALEXANDER, the Director delivered an address at its annual meeting, in which he pointed out how the whole Central Western section of the United States, especially its manufacturing cities, should get into closer touch with the markets of Latin America. The attention which was given his argument, not only by his audience but by the newspapers of Toledo, was evidence of the desire of that progressive city to know more of, and get into closer contact with, Latin America.

CONSUL-GENERAL OF THE UNITED STATES OF AMERICA AT GUAYAQUIL,
ECUADOR.

HERMAN R. DIETRICH, Consul-General at Guayaquil, Ecuador, was born and reared at Utica, Missouri, where during his business career he held various offices of trust, also serving as postmaster at that place under the administration of President McKinley, which position he resigned in 1902, after being elected to the general assembly of his native State. In 1903 he was appointed to his present post. From November 12, 1907, to August 15, 1908, Mr. DIETRICH was detailed to Quito, Ecuador, to assist the American Minister in the arbitration matter between the Government of Ecuador and the Guayaquil and Quito Railway Company, and in February, 1909, he was in charge of the affairs of the legation during the absence of the Minister in the United States. He was instrumental in securing the issuance of a special decree by the President of Ecuador in 1908 granting the Chinese a legal right to reside in that country under certain conditions, which resulted satisfactorily to both governments concerned.



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HON. HERMAN R. DIETRICH,
Consul-General of the United States of America at Guayaquil, Ecuador.

PROGRESS ON THE PAN-AMERICAN RAILWAY.

The latest reports indicate that the Pan-American Railway is becoming more and more a fact. Various links in the long chain from the United States to the Argentine Republic and Chile are being joined together, and it is not an idle prediction that in ten or fifteen years it will be possible to make the journey from New York to Santiago, Buenos Aires, and Rio de Janeiro by rail as well as by sea. D. P. THOMPSON, the outgoing Ambassador of the United States in Mexico, has purchased a controlling interest in one Mexican road called "The Pan-American Railway," running down through the southwestern section of Mexico into Guatemala. Mr. J. SELWIN TATE, one of the leading bankers of Washington, in communicating with the Director of the Bureau on this project of Mr. THOMPSON'S, writes:

Mr. THOMPSON says he has made the[®] purchase for himself, and that he will make the road (280 miles long) the best in Mexico. When a bridge—contemplated—is built across the Suchiate River, and 25 miles of road are built on the Guatemala side to connect, and when Mr. THOMPSON's million dollars' worth of betterments are completed, then the old dream of a Pullman service from Canada to Guatemala will be realized. The road runs through a country which is very rich in a great variety of agricultural products and penetrates a rich mineral section.

PAN-AMERICAN MEDICAL CONFERENCE IN COSTA RICA.

As this issue of the BULLETIN is going to press there is meeting in San Jose, the beautiful capital of Costa Rica, the Fourth Pan-American Medical Conference. If environment and hospitality can have anything to do with the success of a gathering of this kind, there is no question that the delegates will return satisfied with their treatment and with what they have accomplished. The people of Costa Rica, and especially of its capital city, are noted for their kindness toward foreigners, and there is a culture and progressive spirit there which makes it an ideal spot for a gathering of this kind. In view of the importance of the conference, and as a compliment to the Costa Rican Government, the International Bureau is sending Dr. ALBERT HALE, one of the members of its staff, to represent it at San Jose during the sessions of this international gathering.

THE PAN-AMERICAN COMMITTEE OF THE UNITED STATES.

At a recent important meeting of the Pan-American Committee of the United States appropriate resolutions were unanimously adopted with reference to the late Hon. WILLIAM I. BUCHANAN and Maj. Gen. A. E. BATES, prominent members of the committee who had passed away since the preceding session. The place of General BATES was filled by the ap-

pointment of Maj. Gen. GEORGE W. DAVIS, U. S. Army, retired, but the committee thought it best to consider further any suggestions as to the vacancy created by the death of Mr. BUCHANAN, inasmuch as he had been the president of the committee. Dr. L. S. ROWE, as acting chairman of the committee, appointed Senator S. B. ELKINS, ex-United States Senator JAMES B. McCREARY, Congressman JAMES L. SLAYDEN, WILLIAM E. CURTIS, and Director BARRETT members of a committee to urge upon the United States Congress the necessary appropriation for proper participation on the part of the United States in the Fourth Pan-American Conference to be held at Buenos Aires in July of this year. Another committee, consisting of Dr. L. S. ROWE, Dr. PAUL S. REINSCH, Mr. WILLIAM E. CURTIS, Gen. GEO. W. DAVIS, and Director BARRETT, was named to assist the United States delegation in preparing material for its use at the conference. The opinion was strongly expressed by members of the committee that, in view of the importance of the coming conference and as a compliment to the Latin-American Republics, the President of the United States ought to name as delegates only those men whose names stand high and are well known in both North and South America, and who are interested in the development of closer relations among the American Republics.

OWNERSHIP OF UNITED STATES EMBASSIES IN LATIN AMERICA.

It has long been admitted that the United States ought to own its embassies and legations in foreign countries, and it is to be hoped that in the near future the United States Congress will appropriate money for this purpose. If steps are taken in this direction, the capitals of Latin America should be considered, as well as those of Europe, and in the discussions which have arisen such points as Mexico City, Havana, Rio de Janeiro, Buenos Aires, Santiago, and Lima have been prominently mentioned as capitals where purchases would first be made, followed by others in the remaining capitals. In this connection it is interesting to note the work being done by Mr. E. CLARENCE JONES and Mr. FREDERICK TOWNSEND MARTIN, of the American Embassy Association, an organization which is trying to awaken sentiment throughout the United States in favor of government ownership of its embassies and legations abroad. They are showing a public spirit which is worthy of commendation.

DR. DIAZ PRIETO, MEXICAN CONSUL AT SAN DIEGO, CALIFORNIA.

Dr. JOAQUIN DÍAZ PRIETO was born in Frontera, Tabasco, Mexico, and has been in charge of Mexican consulates in different cities of the United States of America since 1882, when he was appointed consul at Tombstone, Arizona. He was transferred to Los Angeles, California, in 1886; to



DR. JOAQUIN DIAZ PRIETO,
Consul of Mexico at San Diego, California.

Corpus Christi, Texas, in 1893; to Phoenix, Arizona, in 1899; to Cincinnati, Ohio, in 1900; and has served in San Diego, California, from 1903 up to the present time. Dr. DÍAZ PRIETO is a graduate of the Medical School of Mexico, and also of the University of New Jersey. He has been a member of the Military Medical Association in Mexico, and was the founder and vice-president of the first Consular Club established in Cincinnati, Ohio, in 1902, being also a member of several scientific, literary, charitable, and mutual-aid societies. Dr. DÍAZ PRIETO has consistently and enthusiastically labored for the development of trade between Mexico and the United States.

TRAVEL TO SOUTH AMERICA.

The Director wishes to urge every person who is fond of visiting foreign countries and can afford to travel, but who has not reached a decision as to where he will go, to plan a trip to South America. Where ten people now undertake that journey, a thousand could enjoy it. Every steamer with good passenger accommodations running from New York to South America should be crowded with people desiring to see an interesting portion of the world. The general impression, however, prevails that it is impossible to go from New York to such places as Rio de Janeiro, Montevideo, and Buenos Aires in first-class boats, and that it is necessary to take a route via Europe. While it is not claimed that vessels going direct from New York are equal to the best passenger steamers of Great Britain, Germany, France, and Spain, yet there has been such an improvement in the quality and size of the vessels plying between New York and the principal ports of South America that comfortable accommodations can be found on vessels of large size and fair speed. It is to the credit of the Lampert & Holt Line, of which BUSK and DANIELS are the enterprising agents in New York, that it has not only put on a number of new boats with excellent passenger accommodations, but it has issued an interesting pamphlet entitled "South America: a Land of Scenic Splendor, a Continent of Contrasts, a Traveler's Paradise," which should cause scores of persons who have heretofore given no thought to Latin America to consider the advisability of going there. Copies of this pamphlet are in the possession of the Bureau and will be sent to any of our readers who may wish to get the advantage of this information.

INTERNATIONAL EXHIBITIONS IN BUENOS AIRES.

Although the participation by exhibitors from the United States in the Transportation, Agricultural, and Fine Arts Exhibitions to be held at Buenos Aires from May to November of this year may not equal that made by exhibitors from European countries, it is hoped that there will

be a sufficient display to give a fair idea of what is being done in the United States along these lines. The Director has tried in every way to interest manufacturers, agricultural interests, and artists in these exhibitions, and now he is trying to impress the American traveling public, who wish to see something of the rest of the world, with the fact that they should take advantage of this great celebration which is to be held in Buenos Aires this summer and make an extended visit to South America. They will then see with their own eyes the progress which is being made by the Latin American Republics.

CHILEAN FINE ARTS EXHIBITION.

A famous sculptor and artist recently remarked to the Director of the Bureau, on seeing a picture of the proposed building for the Fine Arts Exhibition to be held at Santiago, Chile, in September of this year, in celebration of the one hundredth anniversary of Chilean independence: "How remarkable! I do not believe that there are a dozen artists in the United States who realize that Chile is undertaking an important exhibition of this character and is erecting such a beautiful building to house it." As the Director proceeded to tell him of the area, the population, and the commerce of Chile; of the beauty of its capital city, Santiago, and of the culture of its people, he then went on to say: "I can not imagine any greater educational work than the International Bureau is doing, and I want all the descriptive matter you have concerning Chile to send to my friends in the artistic world." This conversation is cited simply as evidence of the enthusiasm displayed by everybody when the facts in regard to any country of Latin America are made known.

CONSUL OF THE UNITED STATES OF AMERICA AT IQUIQUE, CHILE.

REA HANNA, Consul at Iquique, Chile, was born at Aurora, Kane County, Illinois, March 11, 1878. When 9 years of age his parents removed to Los Angeles, California, where he attended the public schools. In 1896, his family having removed to Berkeley, in the same State, he entered the College of Electrical Engineering in the University of California. He later entered mercantile business in San Francisco. On May 19, 1906, he was appointed vice and deputy consul and marshal at Amoy, China, and in 1907, after passing a consular examination, was promoted to his present post.

BRAZILIAN EXPENDITURES FOR HARBOR IMPROVEMENTS.

The large sums of money which have been expended by the Brazilian Government, or by its individual States, in the improvement of the harbors of that country, are evidences of its intention to hold its place



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REA HANNA,

Consul of the United States of America at Iquique, Chile.

among the great commercial nations of the world. The combined cost of harbor works at Rio de Janeiro, Santos, Para, and Rio Grande do Sul represent a greater expenditure than is now being made by the United States Government for its coast harbors, and there are very few countries in Europe that are doing more in this direction. The demand upon the Bureau from all parts of the world for information regarding this great Republic shows that the appreciation of its size, resources, and opportunities is rapidly spreading.

AMERICANS IN MEXICO DEFEND MEXICO.

The International Bureau is in receipt of so many letters from Americans living in Mexico speaking in kind terms of President DIAZ and of the administration of the country, that reference is here made to them. Despite some stories regarding the country and conditions which have been spread broadcast, there seems to be an unanimity of opinion among persons writing the Bureau—and such letters are entirely unsolicited—to the effect that Mexico and President DIAZ are deserving of better treatment, and that it is unfair to hold the sixpence of prejudice so near the eyes that there can not be clear vision of the general good and prosperity beyond which characterize the Mexico of to-day. Investigation of social conditions in the United States, in England, in France, and in other countries, would bring to light similar tendencies which, however, would not be construed as in any way showing that these countries are not, on the whole, making progress toward a higher civilization.

CUBA'S ATTRACTIONS FOR VISITORS.

The popularity of Cuba as a winter resort is evidenced by the large number of persons going there this winter from the United States. There is a charm and fascination about this island that inspires in him who visits it once an irresistible desire to go again. The attraction is not by any means to be found entirely in the climate, the balmy atmosphere, and the pleasing appearance of nature; the people themselves have much to do with its fascination for the visitor. Nearly all persons sojourning in the island return with delightful recollections of new friends and acquaintances they have made among the representative men and women of Cuba, and they almost unanimously express the hope that this Republic will grow stronger and more prosperous as the years go by. In other words, the average man from other countries who spends some time within the limits of Cuba, studying its people and its possibilities, leaves it as a true friend, sincerely interested in its welfare.

ONE OF PAN-AMERICA'S FRIENDS.

It is gratifying to note the interest which ex-United States Senator HENRY G. DAVIS, of West Virginia, takes in Pan-American affairs. Although he is now 86 years of age he possesses rare vigor of mind and body and frequently honors the International Bureau with a call to discuss Pan-American affairs. It will be remembered that he was a delegate to the First Pan-American Conference, held in Washington in 1889-90, and chairman of the United States delegation to the Second Conference in Mexico in 1901-2. He has devoted much attention to the Pan-American Railway, and hopes to live to see the project so well under way that it will be assured of completion within a reasonable time.





BOOK NOTES

From the Congressional Library of the United States (HERBERT PUTNAM, Librarian) a work of great value has been received, "A List of Geographical Atlases in the Library of Congress." Compiled under the direction of P. LEE PHILLIPS, Chief of the Division of Maps and Charts, the work describes the 3,470 geographical atlases in the Library. In addition to standard cartographic works, both ancient and modern, the list includes maps of cities, charts printed for the use of travelers, for reproduction in historical works, for scientific expeditions, and to accompany reports on boundary disputes. The PTOLEMY editions and those of ORTELIUS, MERCATOR, and BLAEU are minutely described, and the more recent atlases of the Italian, Dutch, French, German, and English schools are included. The maps relating to America are brought to the attention of the student through bibliographical notes. Among the earlier atlases of modern times are those containing the WALDSEEMÜLLER and RUY SCH maps prepared in 1507 and 1508, respectively, and on which, for the first time, the New World figures. On the map of SYLVANUS of Eboli (1511) a printed delineation of the North American Continent appears for the first time. Another significant feature of the last-named work lies in the fact that it represents a breaking away from the blind confidence that almost every scholar in the beginning of the sixteenth century had in the PTOLEMY projection, for up to that time the atlas of the old Alexandrian geographer had been the basis of cartographic work. Many of the atlases contain the maps presented by opposing claimants in boundary disputes and show remarkable chronological sequence ranging from remote periods to the present time. Volume II, devoted to the author list and the index, places the subject matter of Volume I within immediate reach. The publication is for sale by the Superintendent of Documents, Government Printing Office. Price, \$2.35, cloth.

The well-known house of G. P. Putnam's Sons, of New York City, will publish on or about January 15, 1910, a work in English on the life and career of President PORFIRIO DIAZ, of Mexico, written by Mr. José F. GODOY, Minister of Mexico to Cuba, and for many years connected with the Mexican embassy at Washington. The biography of President DIAZ will contain over 40 half-tone engravings, maps, and charts; and besides giving an account of the leading events in President DIAZ's life will show the advance made by Mexico

during the last thirty years in all lines of public improvement, thus forming a succinct history of the Mexican Republic for the last quarter of a century.

One of the most important features of the work will be a great number of opinions or commentaries on the life and career of President DIAZ, written especially for the book by some of the leading diplomats, statesmen, military and naval leaders, public writers, heads of universities, and bankers in the United States and Canada.

This biography is not Mr. Godoy's first work in English pertaining to Mexico. Some years ago he published "A Legal and Mercantile Handbook of Mexico," and before that time he had written the English section of the well-known work entitled "The Prominent Men of Mexico." Furthermore, during the Pan-American Exposition in 1901 he wrote "A Few Facts About Mexico," which was published by the Mexican commission to that exposition and had a large circulation in the United States and elsewhere.

The Government of Colombia has published an interesting pamphlet of 136 pages, entitled "*Suplemento á El Telégrafo, Número 85*" (1909), containing a history of the establishment, development, and growth of the telegraph system of Colombia from its inception in 1865 to the present time. In May of that year a contract was made with the American firm of Davison, Stiles & Woolsey for the construction and equipment of a telegraph line between Bogota and Nare, a distance of 150 miles, at a cost of \$45,000, and in December of the same year 20 kilometers of the line, with two offices, were in operation. Shortly thereafter this line was extended to Medellin, Facatativa, and Honda, and gradually the system has grown and developed until now the principal towns of the Republic are in communication with each other and with the outside world. In 1875, or ten years after the beginning of the laying of the first line, there were 2,190 kilometers (1,358 miles) and 53 offices in operation, the system having grown in 1892 to 9,680 kilometers (6,002 miles) and 273 offices. Since that time there has been a steady and healthy growth of the telegraph system of Colombia, and a telegraph map, recently issued by the Government, shows that the system of the Republic now embraces 18,000 kilometers (11,250 miles), with ramifications to the remotest confines of the Republic. A wireless station now exists at Santa Marta, and a school of wireless telegraphy has been founded in the capital of the Republic.

It is a delight to pick up and to read such a book as the "*Involuntary Chaperon*," by MARGARET CAMERON (Harper & Brothers, in New York, 1909). There is no effort made of developing a romance, but

THE EVOLUTION OF THE SKY SCRAPER IN NEW YORK.

To the incoming ocean traveler the lower end of New York seems the most astonishing thing in the world. Cliff-like buildings throng the shores of the Hudson River—buildings whose height can only be appreciated when scaled by the eye of the observer from the ravines of streets created by the structures. The tower of Madison Square Garden, to the left, surmounted by St. Gaudens's "Diana," raises the goddess to a height of 300 feet above the ground, the main building covering an area of 425 by 200 feet. An architectural copy of the tower of the Cathedral of Giralda at Seville, it was a subject of much controversial argument when first erected. Its height has since been eclipsed by the great tower of the Metropolitan Life Building, rising nearly 700 feet from the pavement in 46 stories. To the right, the curious "Flatiron" building separates the tide of traffic through Broadway and Fifth avenue with its 290 feet of structural elevation.



it tells two very pretty love stories; nor is there much formal description, but many descriptive bits of South America, presenting pictures of Lima, Santiago, the Pass of the Andes, of Buenos Aires, and of Rio de Janeiro which can well be compared with those in more pretentious volumes. The book appears to give the incidents of a hasty voyage from New York, across Panama, down the west coast, and up the east coast of South America. Interwoven with these are the little love stories, pictures of the social life experienced by the travelers, and many shrewd observations on the customs of the people. It does not escape the sharp eyes of Mrs. CAMERON that American manufacturers are bad packers and that there is a great need of an American merchant marine, or that if your North Americans were as shrewd in the Southern Continent as they are at home, markets would be rapidly extended in that direction. Like the author who saw the moon for the first time about the first of the month, Mrs. CAMERON must have slept continuously on the voyage southward before she noticed the southern cross only after passing Panama, whereas old travelers in the Tropics could have told her that this constellation was visible even in the Caribbean Sea. Her Spanish, too, is somewhat "wabbly," for she continuously spells breakfast "almuerza," which is a quite different word from "almuerzo." This is a triviality, however, for the book as a whole is charming and true, and she catches the spirit of Latin America as thoroughly as it deserves.

The department of zoology of the graduate school connected with the Indiana University is engaged in a study of divergent evolution as shown by the tropical American Characin fishes. The largest aggregation of collections of South American fresh-water fishes in the world is available for a monograph in preparation. Collections have been received from Central America through the Field Museum of Chicago; from Brazil, through the British Museum and the Paulista and National Museums of Brazil, located at São Paulo and Rio de Janeiro, respectively. South American collections have been loaned by the Philadelphia Academy of Sciences, by the United States National Museum, and Stanford University, and by special arrangement with Harvard University the collections made by L. AGASSIZ and his assistants during the Thayer expedition and others are available for the work. Through the Carnegie Museum at Pittsburg explorations have been made in the coastal rivers of Brazil, Uruguay, and the Argentine Republic, and in the basin of the Paraguay, the results of which are to be incorporated in the published work.

The Bureau of Manufactures of the Department of Commerce and Labor of the United States in an illustrated booklet shows the loss sustained in the foreign trade of the United States from defective packing, and tells what should be done to provide a remedy. Something has been accomplished already by the Bureau in remedying this unfortunate laxness on the part of shippers, but much remains yet to be done.

The railroad managers have estimated the freight loss and damage in the United States to aggregate \$20,000,000 per annum, while economic loss to the country is vastly greater. The greatest source of this loss is improper and inadequate packing. Goods shipped to the west coast of South America are generally transferred across the Isthmus and frequently have to be lightered at the port of entrance, all of which subjects them to great strain that can only be avoided when properly packed. Goods shipped to Central America and to many other parts of the world are transferred into the interior on the backs of mules, or carried by coolies with poles. High temperature and moisture must necessarily be guarded against, and as the customs duties often are levied on the weight of goods, unnecessarily heavy casing must be avoided, but inadequate packing means oftentimes a considerable if not a total loss of the goods.

The Republic of Panama in its report of the statistical department for 1908 makes its first annual report on economic conditions in the country since the inception of its life as an independent state. The mass of information contained is of unquestioned value and the consideration asked by the director of statistics, Sr. J. A. HENRIQUEZ, on account of incompleteness will be readily granted by all who realize the difficulties attendant upon the compilation of trustworthy data of this character.



WHAT IS IN THE MAGAZINES

“The World To-Day” for December, 1909, publishes the fifth article in the series on the new South America as discussed by Prof. PAUL S. REINSCH. Chile, “the land of many climates and varied resources,” is divided by the writer into four distinctive zones having separate geographical and geological characteristics and developing their economic life on absolutely different bases. To the north lies the mineral zone, with its nitrate and copper deposits; adjoining is the area of gardens and vineyards; third, is the great agricultural or grain district; and to the south are the mountain slopes and highlands of Chilean Patagonia, adapted especially to sheep raising. Turning with regret from a description of the scenic beauties of the Republic, which are declared to rival the Italian Corniche section, Profesor REINSCH devotes the major part of his paper to a study of the industrial and economic development of the country. Placing the extraction of nitrate at the head of the list of industries, yielding an annual income to the Government of over \$22,000,000, derived from export duties levied on the product, copper mining is regarded as the next asset of value to the Government. At present the copper deposits are inadequately exploited, although the mass of Chilean ores are said to contain from 15 per cent upward of metal against the 5 per cent ore which forms the basis of production in other parts of the world. Coal and petroleum are also foremost factors in the industrial development of the country, and their existence in appreciable quantities is recorded. The total capital invested in manufacturing industries is stated as \$47,000,000 and the output valued at \$70,000,000. The interesting statement is made that public services throughout the country are rendered at surprisingly low rates; local postal charges are inconsiderable; street railway companies in Santiago charge 1 and 2 cents for second and first class transport, respectively, and the cost of living is remarkably cheap. The article closes with the advice to United States capitalists and manufacturers to seize the opportunities afforded by the approaching completion of the Panama Canal to establish close and profitable business relations with the progressive Republic.

“The Annals of the American Academy of Political and Social Science” for November, 1909, is devoted to a consideration of American business conditions, and conspicuous among the many valuable papers on the subject is the reproduction of a speech delivered by

Hon. JOHN BARRETT, Director of the International Bureau of the American Republics, before the National Association of Manufacturers. In considering "South America—Our Manufacturers' Greatest Opportunity," Mr. BARRETT emphasizes the necessity of a thorough study of the export market afforded by the countries to the south for manufactured products from the United States. He adds: "There is no portion of the world which buys, out of the total export of the United States, a greater proportion, in ratio to population, of our manufactured products than do the Latin-American Republics. The most interesting part about our trade with Latin America is that those people buy all these manufactured things that embody labor, embody capital, embody great plants, embody great investments, and therefore bring the chief return to us. Our great natural products which bring us the least profit go to Europe in larger quantities. South America will always be a wonderful field for the development and sale of our manufactures, and that is why I call it to your attention as perhaps our greatest foreign opportunity." The remarkable and successful efforts on the part of European manufacturers in these markets are cited as proofs of this assertion. Upon the provision of adequate tariff, shipping, and banking facilities rests, it is stated, the future of commercial relations between the Americas.

Under the caption "Our modern frontiersmen," ALBERT EDWARDS, in the "Outlook" for December 4, 1909, writes an interesting account of the methods whereby the industrial ideals of the United States are being carried into execution in Latin America. With special reference to Costa Rica, which Republic is described as the country where more school-teachers are employed than soldiers, the writer dwells upon the manner in which, through inconsiderate aggressiveness of bearing, the industrial pioneer is creating a wrong impression throughout Latin America as to the attitude of the United States toward the national governments. The story of the great banana company in that Republic is cited as an example of the absorption of national industries by foreign corporations which, while developing the resources of the country, nevertheless diverts the resultant capital. Another important work to which attention is directed is the installation of a 15,000-horsepower electric plant in the heart of a tropical jungle, and while only praise is accorded the spirit of the enterprise, the agents are made the subject of wholesome criticism. That ultimate benefit will be derived from such development can not be denied, but that the mode of procedure of the advance guard of material progress is offensive is equally undeniable.

Lying off the coast of Venezuela, the island of Curaçao, with its Portuguese name and its Dutch colonists, is intimately allied with the history of the Republic whose shores lie 50 miles to the south. This little "Paradise of the Dutch West Indies," as it is called, is appreciatively described by CHARLES JOHNSON Post in the "Century" for December, 1909. The ideal natural harbor of Willemstad, the sole city of which the island boasts, explains to a great degree the brisk trade formerly carried through the port, and the babel of tongues and mixtures of races which pervade the streets show the cosmopolitan character of the traders whose merchandise was landed or shipped here. In the schools, from the most exclusive to the humblest government institution, Dutch, French, Spanish, English, and Papiamento are taught, while churches display the same catholicity of doctrine. The island gives its name to the famed cordial made of bitter orange, and straggling groves of the tree are to be seen on approach from the sea. The fruit was, however, literally wrung from a dry and arid soil, for rainfalls never occur in the island, and a gradual decline of the industry is reported.

The individuality of the South American Republics is the topic under discussion by Reverend Doctor CLARK in the "North American Review" for December, 1909. Calling attention to the popular fancy that the same history, traditions, resources, and language characterize the various countries, it is stated that "nothing could be farther from the truth." Each Republic has its own traditions, its own problems, its own peculiarities, and its own peculiar patriotism which considers no flag quite so precious as that which floats over its own soil. While Doctor CLARK does not indicate with quite so much exactness the difference between the other Republics as that which exists in the matter of language and origin between Brazil and the Spanish-speaking countries, he classifies with ingenious phraseology each land according to its salient characteristic. Thus, Panama is called the "country of the great ditch;" Chile, "the fortunate Republic;" Brazil, "the boundless," etc., with comments demonstrating the pertinence of each appellation.

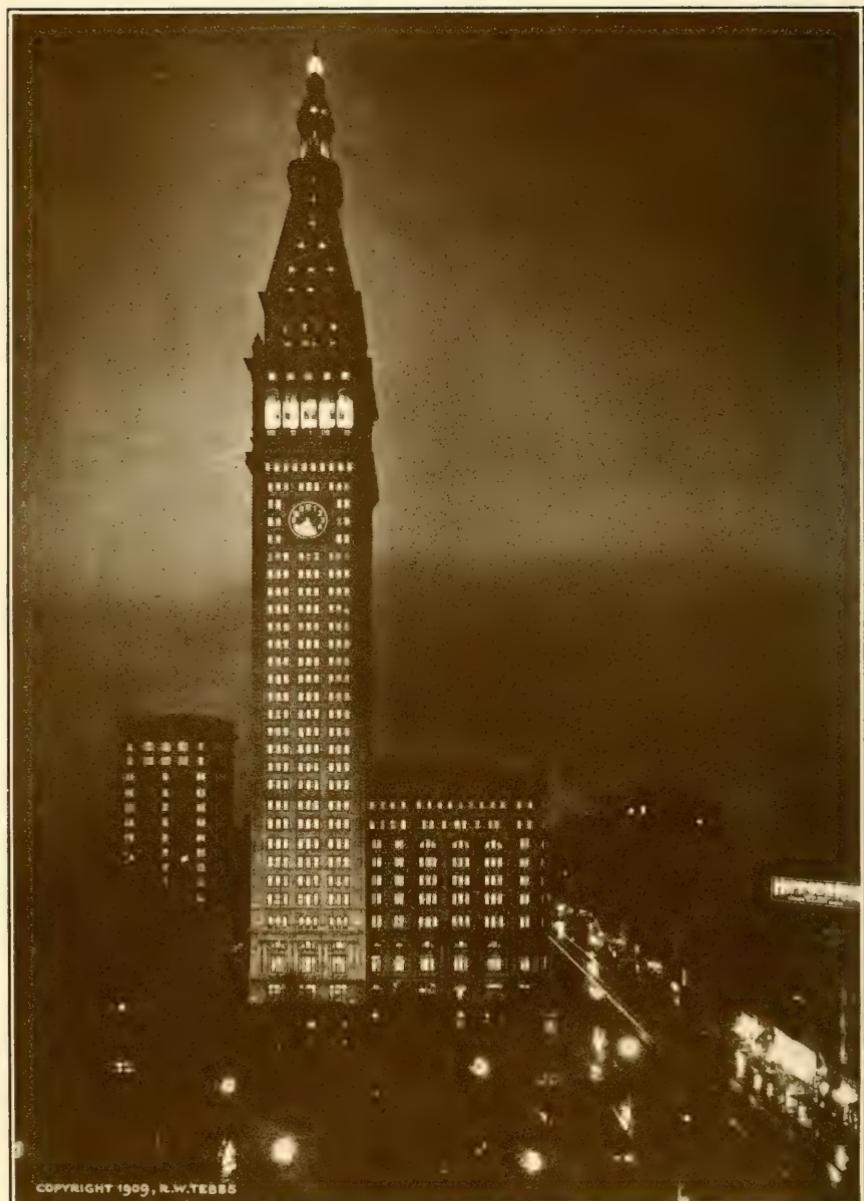
"*Berichte über Handel und Industrie*" (Commercial and Industrial notes). The official publications of the German Department of the Interior have recently printed three very complete essays relating to Latin America. The first (November 19, 1909) deals with the agave plant in Mexico, and certain phases of its economical uses. The second (November 19, 1909) is a report on Bolivian rubber, and

covers in considerable detail the character of rubber in that Republic, the location where it is chiefly grown, and the trade routes by which it is carried abroad. An extensive list of the dealers in rubber throughout Bolivia is given, which may be very useful to American importers. The third (October 4, 1909) is a careful study of the northwestern portion of the Argentine Republic, beginning with the town of Rosario, of which a description is given of 16 pages, and devoted to an analysis of the country up to the border of Bolivia and Paraguay. As data are given concerning products, such as sugar, about which it is sometimes difficult to obtain figures, this publication is helpful to all those having access to it.

The December, 1909, issue of the "Review of Reviews" in its section devoted to leading articles of the month, reproduces extended extracts from the article on chicle written by MR. RUSSELL HASTINGS MILLWARD for the October number of the *MONTHLY BULLETIN* of the International Bureau of the American Republics. As the base of the popular chewing gum of commerce, chicle, obtained from the tree known as *Achras sapota*, indigenous to certain countries of Central and South America and to parts of Mexico, has shown a constant advance in price since 1888. At that time from 7 to 8 cents a pound was the usual price, while 48 cents is now the market price. In the fiscal year ending June 30, 1909, the imports of this gum by the United States amounted to 5,450,139 pounds against less than 1,000,000 pounds twenty-four years earlier.

The "Outing Magazine" for December, 1909, publishes the seventh article in the series by DILLON WALLACE treating of life beyond the Mexican Sierras. This final paper deals with a trip over cañon trails and departure from Mazatlan for San Francisco. Of the city, he writes that the newly entered railway connection of the Southern Pacific has resulted in promoting a "boom" and that with its population of 20,000 it is not only the largest city in Sinaloa, but the metropolis of the Pacific coast of Mexico. The annual exports to San Francisco alone amount to \$3,000,000, and imports are worth upwards of \$1,500,000. Sanitation measures and quarantine systematically carried out have rendered the locality thoroughly healthful.

The structural composition of rubber is made the subject of some interesting and instructive pictures and text in the "India Rubber Journal" for November 15, 1909, contributed by JAMES SCOTT. As a



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NIGHT SCENE IN NEW YORK.

On festival occasions the tower of the Metropolitan Life Insurance Building makes a central point of illumination. From its summit, on the night of November 2, 1909, election news was flashed by means of colored lights equal to 100,000 candlepower to the 6,000,000 inhabitants of adjacent States, and during the Hudson-Fulton celebrations it gleamed like a gigantic light-house to point the contrast between the past and present.

consequence of a microscopic examination of crude rubbers it is stated that that the more numerous and the larger are the holes disclosed in the rubber the better is the quality denoted. The same issue has information on new Mexican rubbers furnished by the distinguished authority, PEHR OLSSON-SEFFER, Ph. D., the main features of which will be published in a future number of the BULLETIN.

In considering the rubber problem in Brazil the "Economist" for November 20, 1909, states that under present conditions it is impossible to estimate the real value of the commodity to the industrial life of the country because of the fact that many sections where it is found have never been explored, and that as a consequence the actual extent of the forests is still unknown. Fresh discoveries are constantly being made, and though the impression prevails that the supply is practically inexhaustible, yet measures are being taken by various state governments to systematically explore and plant new regions.

The souvenir edition of the "*Revista Ilustrada*," issued in El Paso in honor of the historic meeting of the Presidents of the United States and of Mexico, on October 16, 1909, is an illustrated number of great interest. Apart from the pictorial features, which include portraits of many of the distinguished visitors and reproductions of scenic and architectural beauties, the subject-matter covers such items as a description of the meeting place, El Paso; the city of Juarez; the progress of Mexico; an interesting account of the volcano of Colima; and a paper on Mexico's west coast, the garden spot of the world.

Extracts and illustration from Lieutenant SHACKLETON's story entitled "The Heart of the Antarctic" are published in the "National Geographic Magazine" for November, 1909, through the courtesy of the publishers, J. B. Lippincott Company. While the account of the equipment, journey, and results are of necessity fragmentary, as compared with the published volume, the remarkable photographs give effective indication of the region visited, and stimulate the student to a further investigation of results of the journey to the South Pole.

The Columbus Memorial Library has recently received several valuable publications dealing with the geography of Mexico. Many of them bear the official stamp of the "*Boletin De La Sociedad Mexicana de Geografía y estadística*," and present special essays on topics

relating to the conditions in that Republic, or the résumé of the society's transactions, in which are abstract and historical data presented before it. For purposes of reference they are of decided value.

"The Brazilian Review" for October 19, 1909, publishes complete statistics covering the foreign trade and navigation of the Republic for the years 1907 and 1908, in which every item shipped abroad or received into the country during the periods referred to is recorded. It is a valuable work of reference and puts into the hands of the student the last word on the subject.

"Pictorial America," of Los Angeles, Cal., for October, 1909, is practically a Mexican number, devoting the bulk of its reading space to descriptions of the west coast States and cities.



LATIN-AMERICAN NOTES

The creation of a Department of Agriculture is under consideration in Mexico.

The use of automatic couplers is now obligatory on all railway rolling stock in the Argentine Republic.

The establishment of a night school for adults in Montevideo, the capital of Uruguay, has been authorized by the Government.

Instructors to serve in the agricultural school of Peru have been secured from Belgium, Italy, the Argentine Republic, and France.

It is reported that a rich silver mine has recently been discovered at Serro Azul, near Ribeirao Preto, in the municipal district of São Simao, State of Parana.

Advices from Brazil state that a central sugar mill located in the Bu Valley, in the State of Pernambuco, with a capacity of 200,000 bags, could be profitably operated.

A statue of Balboa is to be erected by the municipal council of Panama in honor of the discovery of the Pacific Ocean on September 25, 1513. The statue is to be of bronze, mounted on a pedestal of marble.

Petroleum wells which have been sunk in the Argentine Republic throughout Mendoza, Neuquen, Jujuy, Salta, and Chubut, have yielded a product which compares favorably with that of the wells of Pennsylvania and Ohio.

The President of the Venezuelan State of Zulia has appointed a commission to investigate the availability of certain lands in the State for the cultivation of bananas. The intent is to secure the establishment in that district of banana plantations at as early a day as may be possible.

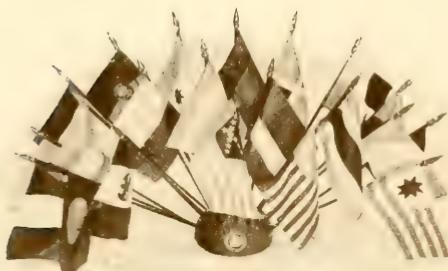
The Government of Venezuela has established at Puerto Cabello a factory for the manufacture of coal blocks, of which it makes 200 per hour. The coal used is slack or steamer coal and is obtained from the mines of Venezuela and mixed with tar, which is also procured in the country; it is then pressed into blocks weighing 22 to 23.5 pounds each. It is the intention of the Government to sell what it does not use.

What is said to be the oldest hospital in America was founded in the City of Mexico by Cortez in 1524, the site chosen being the spot on which the Spaniards under Cortez met Montezuma and his Mexicans. It is known as the Hospital de Jesus. The endowment was

so arranged by its founder that the payment of it has continued down to the present time. A supervising agent is appointed by the descendants of Cortez.

Consul-General R. M. BARTLEMAN, of Buenos Aires, reports that for the year ended July 31, 1909, the Argentine Republic takes for the first time first place among the grain-exporting countries of the world. During that period the shipments from the three leading countries were: 13,700,000 quarters (quarter of wheat=8 bushels or 480 pounds) from the Argentine Republic, 13,500,000 quarters from the United States, and 12,100,000 quarters from Russia.

The Jebsen Line of steamers, with main offices in Seattle, Washington, is planning an excursion down the west coast of the United States, Mexico, and Central America as far as Corinto, Nicaragua, and return. On the home voyage there will be a rail trip in Salvador, another in Guatemala, and a long detour from Salina Cruz through Mexico to the capital and Guadalajara, joining the steamer at Manzanillo. The purpose of the trip is to offer, especially to members of commercial bodies, opportunity to see and to become acquainted with the great commercial and investment possibilities of this portion of Latin America. The steamer *Erna* is scheduled to sail from Seattle January 6, 1910, receiving passengers at Victoria, San Francisco, and San Pedro. This would seem to be an unusual chance for merchants and travelers, and the BULLETIN hopes that advantage may be taken of it.

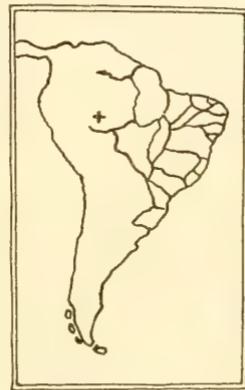


THE MADEIRA AND MAMORE RAILWAY

FROM Cape to Cairo is an alliterative phrase that has attracted extraordinary attention to Africa. Not even the explorations of LIVINGSTON and STANLEY, nor the wonderful resources of the Kongo, have compelled man's interest to the extent of the project of the railway to connect the Cape of Good Hope with the city of Cairo, lying at the Mediterranean outlet of the mysterious Nile, about as New Orleans is situated on the Mississippi. It was conceived by that commercial genius, CECIL RHODES, who in this direction showed the imagination of the dreamer which is always so keen in men of great affairs.

From the Cape to Cairo the direct distance is about 5,700 miles. Of this, over 4,200 are completed, and the intervening gap is as sure of construction as was the interoceanic railway connecting the Atlantic and Pacific in the United States. It well bears comparison with that portion of the Pan-American Railway limited to South America, which measures almost exactly the same distance from Panama to Buenos Aires. The engineering features are about the same, the country through which the line must pass has much the same character, and the development promised for the future will be as wonderful in one continent as in the other. Each will provide a great highway along which travel and transport will be marvelously facilitated. No one who realizes the history of railroad construction during the last seventy-five years can doubt but that both lines will be finished and in operation, no matter what the engineering difficulties may be, before the end of the twentieth century.

The Pan-American and the Cape to Cairo railways, however, are merely agents in the projected plan of development. The essential feature to their success lies in the construction of branch lines attracting to the main artery the traffic which must be the lifeblood of the scheme. Little freight will be carried from end to end, but on the other hand the short haul—the exchange of goods between contiguous areas that are now practically cut off from each other, except for a



MAP SHOWING THE LOCATION OF THE
MADEIRA AND MAMORE RAILWAY.

long detour by sea, and the quicker access to these areas for international commerce—is the problem to be solved. These two magnificent projects are therefore alike in the essential feature. The short haul and the side branches must energize them both.

But there is an alliterative railway in the South American Continent, about which too little is known, and toward which the eyes of mankind have been too little directed. It is a short line now under construction a thousand miles away from the nearest rails with which it could possibly be connected, yet it is no unwarranted statement that this seemingly obscure railway in the jungle will ultimately carry on its roadbed more traffic and do more to develop an area almost bound-



THE BEGINNING OF THE RAPIDS OF THE MADEIRA RIVER.

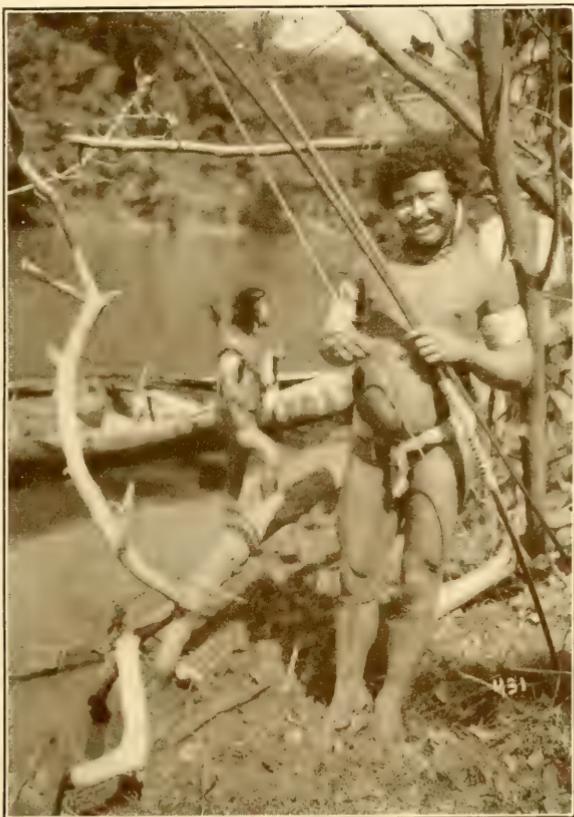
For a distance of about 200 miles the Madeira River is not navigable, excepting for small craft which can pass up and down portions of this distance, and in many places even these must be dragged around the falls and rapids. For this reason the construction of the railway is absolutely necessary to facilitate commerce.

less in extent and potentialities than the 10,000 miles of Cape to Cairo and Pan-American together.

The Madeira and Mamore Railway is intended to tap the heart of the South American Continent, to give outlet to the natural resources of millions of productive but almost inapproachable acres, to bring into touch with oversea commerce a region that can not progress without it, and to open to settlement regions in Brazil, Peru, and Bolivia which must otherwise remain unknown virgin wilderness. This epitomizes its object. It will be necessary, however, to give a picture of the country in which it is building, the resources it unlocks, and the conditions to be overcome before an adequate conception can be

formed of the miracle the Madeira and Mamore Railway purposes to perform.

The Amazon River, fifty years ago the despair of sailing masters, but the delight of adventurers into the unknown, is to-day navigated regularly by ocean steamers to Manaos, 1,000 miles from its mouth; even to Iquitos, in Peru, 1,300 miles farther upstream, vessels from New York, Liverpool, and Hamburg ascend with no great difficulty.



INDIANS OF THE AMAZON BASIN.

There have been some fierce tribes of Indians in this region, especially south of the Madeira River. Thirty years ago cannibals were reported to live in the jungle, but to-day there are only a few of these aborigines in the neighborhood of the Madeira and Mamore Railway.

Para, 100 miles from the open Atlantic, and touching within a radius of 2,500 miles all of western civilization, has, in almost a generation, grown to be a metropolis of 200,000 inhabitants. The impetus given to the life of the city comes altogether from the trade over 40,000 miles of interior waterway, and this is expanding with startling proportions.

The Madeira River empties into the Amazon 900 miles above Para. It flows from the southwest, having its source almost 900 miles above



THE PRIMEVAL FOREST IN BRAZIL.

The dense jungle of the river forests must be penetrated foot by foot in railway construction work. Sometimes the advance is only a few hundred yards a day.



A PARTY OF MADEIRA AND MAMORE RAILWAY ENGINEERS ON THE RIGHT OF WAY.

its mouth, at the junction of the Beni and Mamore rivers, on the frontier of Bolivia and Brazil. From Villa Bella, the Bolivian custom-house at the confluence of these rivers, there are two routes, partly by fluvial navigation, partly by overland stage coach, which will some day be displaced by a railway to La Paz. Either route will measure about 900 miles, although a railway will necessarily be longer in order to allow for the ascent of 12,000 feet to the plateau on which the capital of Bolivia is situated.

The immense area drained by the Madeira River and its affluents, chief of which is the Mamore, is practically equal to the size of Texas, but to this must be added many, many thousand square miles of con-



CLEARING THE WAY FOR TRACK CONSTRUCTION.

When once the forest is penetrated there still remains the heavy work of grading. In some places this is as difficult as clearing the forest, for the soil may be heavy, and even rocky.

tiguous territory in eastern Bolivia, Peru, and Brazil, which find their natural, in fact their only, outlet through the channels of the Madeira and Mamore.

This is the heart of South America. It is destined to make the names of Bolivia, Peru, and Brazil well known in the consuming markets of the world long after the tin of the first, the copper of the second, and the diamonds of the third are forgotten. The mineral wealth of all three Republics may become exhausted, but the agricultural resources will increase as time goes on and as the land becomes more accessible. In the areas contiguous to the great rivers, such as the Madeira, the present products are rubber and cacao. The larger proportion of rubber comes, as is known, from the Amazon,

but that is because the upper reaches of its tributary streams are as yet outside the beaten paths of commerce. The contribution from this heart of South America is relatively small, but it can be increased to an enormous extent when once transportation between the mouth of the Amazon and the Mamore region is facilitated. Cacao will grow where rubber does, and under the same climatic conditions numerous other tropical products will easily thrive.

But the resources of the heart of South America will not be exhausted by these two aids to modern life. Above the level of the river valleys lie areas of equal richness and fertility. Subtropical products, such as cinchona and the citrus trees, grow there; coffee, cotton, and



A ROADBED ON THE MADEIRA AND MAMORE RAILWAY.

In many places, after excavations have been made to the proper level, there still remains to be removed the stumps of enormous trees extending deep below the surface. These must often be removed by means of dynamite before construction can proceed.

sugar have no better soil; cattle can find an open pasture all the year round. Still higher on the mountain side, even if only a few degrees from the equator, are fertile valleys destined some day to be granaries contributing in corn and wheat to the world's food supply. To-day they are, unfortunately, unavailable and almost unoccupied because they are shut off from an outlet westward across the forbidding Andes by a rocky wall of 12,000 feet. To cross this is no impossibility to the engineer, but the mountains offer an eternal barrier against the extension of trade routes in that direction. Trade must flow eastward. In the indefinite future Bolivia will have an outlet for the southern territory through the Paraguay and the River

Plate, but this valley of the Madeira has a natural outlet, and that through which commerce will inevitably pass, when it carries products from or supplies to the still unsettled regions of Bolivia, Peru, and Brazil, northeastward into the Amazon and Atlantic by way of the Mamore and Madeira rivers.

What, then, is the Madeira and Mamore Railway? Why should it be built at all? Because without this railway the entire area is as commercially unapproachable to-day as it was one hundred years ago. The Madeira River is navigable even for ocean-going vessels as far as San Antonio, 660 miles above its junction with the Amazon, but



THE TRACK OF THE MADEIRA AND MAMORE RAILWAY.

Rails are laid now to kilometer 74 (about 46 miles), and for a good part of this distance trains are running. This picture is characteristic of the country through which the railway passes, and therefore there will not be much local traffic, but the whole purpose of the railway will be to facilitate the commerce between the Amazon and the upper reaches of the Madeira River.

beyond that point for a distance of 200 miles to the mouth of the Mamore River it is a series of rapids and falls of such stupendous force that no device of man can be conceived to carry exports or imports on the river itself to a point above the dangerous water where steam navigation is again available. Canals have been projected, but the idea discarded as impracticable; schemes of roads or of tracks for vessels have been conceived only to be abandoned. These rapids must in some way be passed if the interior of the continent is ever to be closely linked with the navigation of the Amazon, and the only solution of the problem is the railway.

The Madeira and Mamore Railway is no new dream of the engineer. In 1846, even before the era of the steam engine, the inconvenience of the passage of the falls of the Madeira aroused discussion both in South America and Europe. In 1851 a United States naval officer reported that the sole obstacle to continuous river navigation from the Atlantic Ocean to Vinchuta in Bolivia, a distance of 2,300 miles, was a series of nineteen falls and rapids in the Mamore and Madeira rivers. In 1868 the construction of a railway around these falls and rapids was seriously proposed by both Brazil and Bolivia, and in this year Col. GEORGE EARL CHURCH was retained by Bolivia to outline the work.^a In 1869 that Government secured him in a



A NEW YORK STEAMER AT THE TERMINUS OF THE MADEIRA AND MAMORE RAILWAY.

The Madeira River empties into the Amazon 900 miles above its mouth, and is navigable for ocean-going vessels for 700 miles. To this point the company now has regular steamers carrying supplies, and from here the railway will transport all traffic into the immense interior of Brazil and Bolivia.

concession to construct such a railway, and the Government of Brazil, on whose land the line must be built, issued a similar concession, providing for an enterprise that "shall be called the Madeira and Mamore Railway."

"On November 1, 1871, at San Antonio, in the heart of a vast tropical wilderness, 1,500 miles from civilization, the gateway to an interior unexplored and almost uninhabited, Colonel CHURCH turned the first sod for a railway that with the faith of a COLUMBUS he firmly believed would open to commerce and immigration a country unsurpassed in latent wealth by any unoccupied territory of equal

^a See biographical sketch, BULLETIN, March, 1909.

extent on the face of the globe. It was an inspiring subject for both poet and artist. This soldier and citizen of the great Republic of the north stood at the head of navigation on the Madeira and pointed out to the sister Republics of the south the pathway of future progress and development."

This auspicious commencement of a magnificent undertaking was destined, however, to meet with disaster. Although funds were collected, steamers built and actually sent to San Antonio, and serious work begun and continued for some time, unforeseen difficulties swamped the enterprise before construction had proceeded beyond the preparation of plans and a few miles of survey. Again, in 1878,



AROUND THE RAPIDS OF THE MADEIRA RIVER.

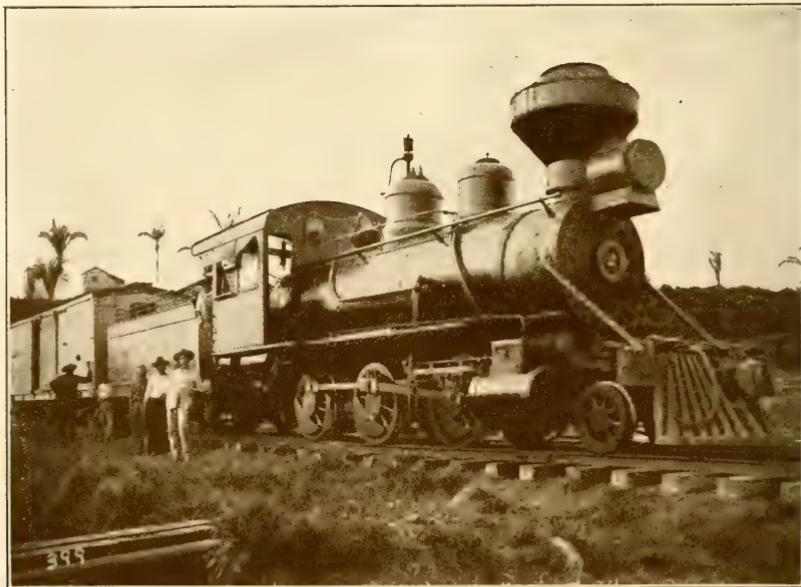
When the rapids on the river are so dangerous that boats can no longer live in them, the natives take the boat from the water and haul it bodily over dry land to the next stretch of still water. All sorts of merchandise go up the river in this way; even pianos and plate-glass windows have thus safely passed the rapids. To displace this primitive method is the purpose of the Madeira and Mamore Railway.

this time under United States contractors, a still more earnest effort was made to construct the Madeira and Mamore Railway. Work was carried on faithfully for one year, with the result that a survey of 320 miles had been cut through the forest, a train run on completed tracks for 4 miles, and the right of way established by clearing for 25 miles. Again the undertaking failed through a variety of causes. There was lacking an appreciation of the hardships inseparable from railway building in a tropical country, and there was manifested an ignorance of the fact that the most unhealthy part of the region was the 250 miles of the river along which this paralleling railway must pass.



THE TERMINUS OF THE RAILWAY ON THE MADEIRA RIVER.

When construction was first begun this water front was a seemingly impassable jungle, but persistence and engineering skill have turned it into a modern terminus equipped for handling the immense traffic which flows up and down the Madeira River.



AN AMERICAN LOCOMOTIVE IN THE HEART OF SOUTH AMERICA.

This engine is a modern Baldwin, built specially for operation in the Tropics. The Madeira and Mamore Railway of 1 meter gauge is 1,600 miles from the Atlantic Ocean, but the engine was shipped there in parts and assembled in the shops of the company.

Perhaps, also, the time was not ripe for such a far-reaching enterprise. The analogy of the Panama Canal may be cited, for in that case, too, the coming necessity was foreseen and the attempt made to meet it, but knowledge of physical conditions did not keep pace with the ambition and skill of the constructing engineers. In Panama these early engineers did their work well; on the Madeira and Mamore they performed equally worthy service, and to-day their results have met the approval of their successors to a remarkable degree. But modern science, with its numerous branches of hygiene and therapeutics to attack disease, as well as electricity and steam to overcome that isolation which is so disastrous to work in the wilderness, had not then reached the almost perfect stage it shows to-day. Energy did not fail, but the tools with which to work had to be



MODERN TRACK CONSTRUCTION ON THE MADEIRA AND MAMORE RAILWAY.

developed to their present high efficiency before success could reward the efforts of those insisting that both the canal and the railway could and must be built.

But the Madeira and Mamore Railway is now, at the end of the first decade of the twentieth century, almost an accomplished fact. The Governments of both Bolivia and Brazil have renewed their financial and moral support. American engineers have taken up the work where their confrères of a generation ago were compelled to abandon it. American skill has utilized resources, first demonstrated to the world by their comrades on the island of Cuba and the Isthmus of Panama, and it will be a matter for American rejoicing—not only in the United States, but throughout the length and breadth of the Southern Continent—when the last spike is driven by Americans and

regular traffic is established between the lower and upper reaches of the Madeira River.

Some constants and contrasts may be pertinently stated, therefore, to illustrate the progress that has taken place within the last thirty years. The eastern slopes of the Andes and La Paz are no nearer New York than they ever were, yet only shortly before that time the only known route to La Paz was around the Horn, a trip of 118 days, or, since 1870, by way of Panama, the Pacific Ocean, and the railway up the western slope of the Andes, one of fully 30 days, with vexatious delays and changes. To-day La Paz can be reached by the latter route in 20 days, and San Antonio, 660 miles above the junc-



AN EMPLOYEE'S COTTAGE ON THE LINE OF THE MADEIRA AND MAMORE RAILWAY.

Thirty years ago the best that could be done for employees working in the jungle was to provide them with the roughest board houses or canvas tents. To-day the working staff is well taken care of in well-built cottages, thoroughly hygienic, and protected after the example of those in Panama from mosquitoes by a screened veranda.

tion of the Madeira with the Amazon, is within 30 days of New York, with easy transshipment at Manaos. Nevertheless, the eastern regions of Bolivia, Peru, and Brazil have no further hope of outlet than the Madeira and Mamore Railway.

During the attempt to construct it, in 1878, the total working force never exceeded 1,000 men at any one time, and only for a brief period approached that maximum, many of these laborers being Bolivian Indians and men from the Brazilian Province of Ceara. To-day the force engaged amounts to 2,500 men, many of them being Germans and Spaniards, with 150 high-class Americans. Then the operating outfit consisted of 1 locomotive with 1 platform car. To-day the railway is built to kilometer 74 (a distance of 46 miles), and there

are already running 5 first-class engines, while 6 more are on the way. The train equipment amounts to 160 flat cars, 36 box cars, 60 ballast cars, 2 first-class and 2 second-class passenger cars. A highly efficient repair shop is now erected, in which attention can be given on the spot to any detail needing it immediately, and every appliance required in regular railway work is to be found in it. Then the line cut and surveyed through the forest had a length of 320 miles, while now this distance is shortened to about 200 miles, almost all of it, beyond kilometer 74 over which trains are running, graded and nearly ready for the track of 1 meter gauge.



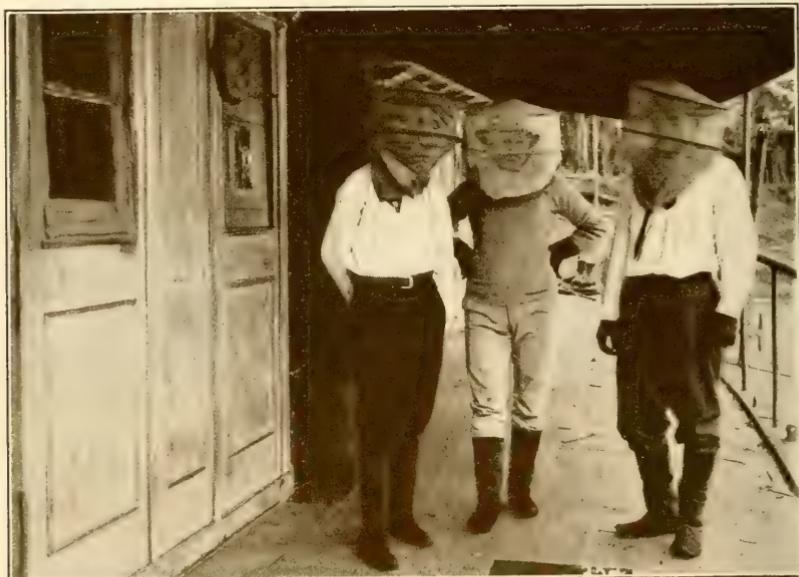
THE HOME OF AN OFFICIAL OF THE MADEIRA AND MAMORE RAILWAY.

Science and commerce have both decided that the best results are obtained by consideration of the comfort of all members of the working staff. Consequently the employees of every grade are provided with homes protected in all possible ways from unwholesome influences.

The Amazon River is the same to-day as it was thirty years ago, but then ocean-going vessels were a rarity, communication over the interior waterways was infrequent, the Madeira was practically an unknown route for steamers, while above the falls and rapids nothing but the native canoe had been seen. Now the channels in both rivers are well charted, and good draft steamers ascend the Madeira regularly as far as San Antonio. Despite the fact that at Porto Velho, 5 kilometers (about 3 miles) below San Antonio, observations show that there is a difference of 46 feet between high water in the rainy season and low water in the dry season, steamers unload supplies at headquarters in San Antonio direct from New York; the upper Madeira has a fleet of its own, with a local traffic developing, and is only

waiting for the completion of the railway, when it will pour its rich cargoes through this new outlet to the sea.

Geographically the country has remained unchanged, but it is almost impossible to exaggerate the contrast between the conditions then and now. When the ill-fated undertaking of 1878 was in full swing, weeks elapsed before the employees on the survey could hear from home. Now the mail reaches San Antonio from New York in 30 days, passing first through Manaos, the business headquarters of the company; there is telegraphic (cable) communication between the rest of the world and Para and up the Amazon to Manaos, and it is planned to install a wireless station at San Antonio, by which the



MOSQUITO NETTING HEADGEAR AS USED FOR THE TROPICS.

The mosquito, as is acknowledged to-day, is the worst enemy to health in the Tropics. These engineers, about to start for the day's work, are so protected that no bare surface is exposed to the attacks of these pestiferous insects.

residents on the line in operation may keep in constant touch with civilization. Supplies of the simplest food were frequently unavailable to the daring frontiersmen of 1878, while now every reasonable want can be satisfied at once from well-kept stores on the line, the company going even so far as to provide a cracker machine, from which 1,200 kilograms (2,640 pounds) of fresh crackers a day are furnished.

Climatically, too, the jungle of the tropics is no whit altered from what it has been for ages. The heat remains the same, the intense rainfall and humidity are the same, and the imminence of jungle fever is unabated. But no more startling contrast can be cited



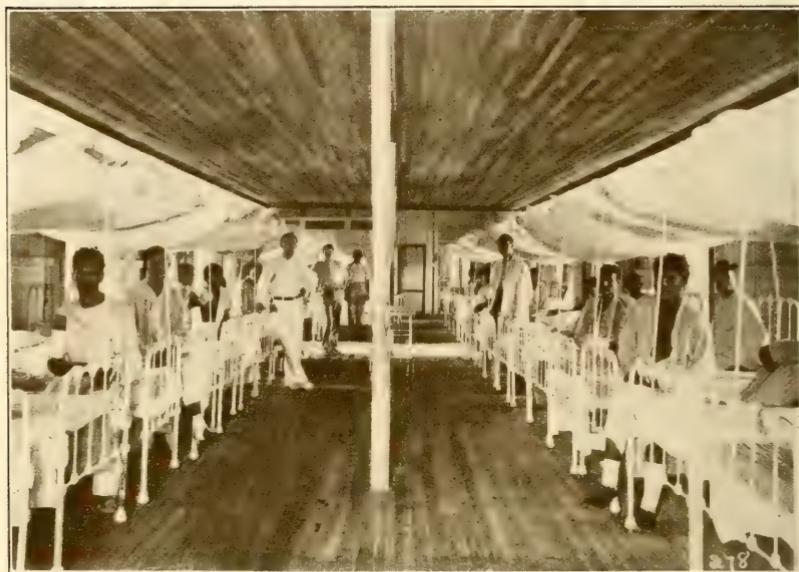
THE INTERIOR OF ONE OF THE BUILDINGS OF THE RAILWAY AT SAN ANTONIO.



THE DRUG ROOM OF THE HOSPITAL AT CANDELARIA.

In the first attempt to build the railway there were times when no drop or grain of medicine could be obtained for 1,600 miles. No construction company in the Tropics at present, however, considers that it is doing its duty to its employees without providing every means to guard their health.

than that between the older and newer theories of infection, or between the older and newer methods of combating disease. In 1878 no advance had been made over the hygienic conditions existing along the Panama Railroad in 1855, or along the canal under the French in 1880. Malarial fever is still malarial fever, but the theory of it has essentially changed. The experiences on the first Madeira and Mamore Railway were the experiences of scores of other construction companies in all parts of the globe. To-day the Isthmian Canal demonstrates what can be accomplished by applied hygiene, and similar results are obtained by the Madeira and Mamore Railway in the wilds of Brazil. The one is a government enterprise, the other is



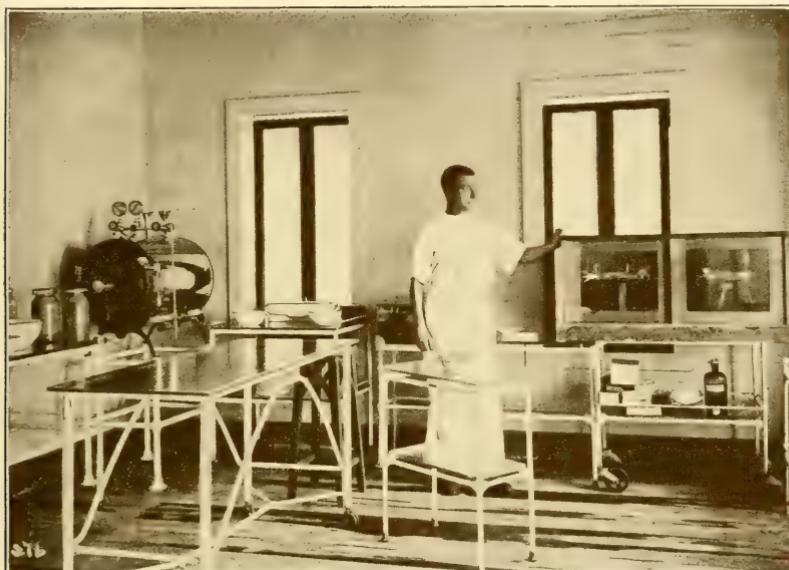
A TYPICAL HOSPITAL WARD IN THE TROPICS.

The equipment of the hospital on the Madeira and Mamore Railway is as modern as can be devised. Attention is called to the adjustment of the mosquito netting, which in the daytime can be removed so as not to inconvenience the patients, but every patient is compelled to protect himself by means of this netting during the time the mosquito is inclined to bite.

largely commercial, but both are actuated by the same principle. Infection is prevented by exact scientific methods and treated in modern hospitals. Thirty years ago the mortality in the construction camp was 23 per cent, while now, with a greater force at work, only 4 white men have died during two years, and the hospital list will compare favorably with that at Panama.

No blame can attach to the band of heroes who first projected and tried to construct the Madeira and Mamore Railway; they worked in the dark. No one can deny the present risk to health from too prolonged residence and activity in the luxuriant tropics; but this can not be used as an argument against the work itself, or to cloud the mag-

nificance of the scheme now so near completion. If Colonel CHURCH realized, in 1868, the future possibilities of the country; if, in 1878, enthusiasm was still more keen for opening a practicable passage between the heart of South America and the Amazon, it must in 1910 be recognized by all that the solution of this problem will be one of the greatest triumphs of the generation. There is little left in South America unvisited by the frontiersman; but there are large areas of



THE HOSPITAL OPERATING ROOM.

Comparing work of construction companies on the frontier a generation or more ago with the spirit actuating civilization to-day, there is shown a wonderful advance. This little hospital 1,600 miles in the wilderness is as completely equipped with scientific apparatus as any of its kind in the world.

fertile plain and forest which can not now be reached on account of natural impediments to the settler and agriculturist. This splendid stretch of territory in Bolivia, Brazil, and Peru is one of them. Modern science and engineering skill are at last overcoming even these hitherto insurmountable difficulties, and a mighty romance of industrial life will be fulfilled when trade and commerce find an easy road along the short 200 miles of the Madeira and Mamore Railway.

VENEZUELA, THE LAND OF THE LLANOS :: ::

VENEZUELA offers a wonderful opportunity for the prospective captain of industry, as well as those gigantic corporations that, having done so much to make the United States what it is, are already looking with anxious eyes for new fields in which to continue their interminable activities.

When we consider the vicissitudes that have befallen Venezuela from the time that OJEDA was fighting the Caribs and Caracas was raided by the buccaneers to recent times, we can not help but be struck with the fact that in spite of all unfavorable factors it has remained prosperous and is always progressing.

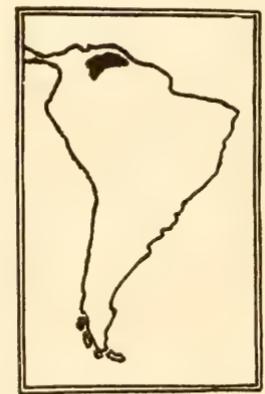
Let us pass, for the present, the opportunities the cultivation of coffee, cotton, tobacco, and sugar might offer and skip any detailed reference to the mighty mineral wealth concealed in this wonderland to the consideration of cattle.

The cry of warning has been sounded by our industrial giants, whose foresight is their secret of success, and the most superficial study should convince the skeptical that with the restriction of our prairie land the time is not far off when the cowboy will be relegated to the region of romance and his country filled with busy hordes of home makers.

The crowding of the cattle land has already shown what we may expect in the future, and one needs no gift of prophecy

to foretell that the time is not far distant when the fathers of our beef industry will be seeking "pastures new," both literally and figuratively.

Venezuela as a virgin field for American enterprise recommends itself. First, the geographical situation of Venezuela gives it special importance with reference to the United States, being the nearest point where such extensive plains are found. The prairies stretch west from Barrancas on the delta of the Orinoco to the frontier of Colombia and from the mountains south of the great river to those that parallel the northern coast. This mighty valley of a thousand streams born of the Apure and Orinoco is estimated to contain 405,620 square kilometers.



MAP SHOWING THE LOCATION OF THE GREAT PLAINS OR "LLANOS" OF VENEZUELA.



Courtesy of Mr. A. Stockman.

THE BREADFRUIT TREE IN VENEZUELA.

This tree, a native of the Indian Archipelago and the South Pacific islands, is found in Venezuela and other tropical South American countries. The tree attains a height of 30 or 40 feet. It bears glossy, dark-green leaves from 1 to 3 feet long, and a spheroidal fruit, usually seedless, about 6 inches in diameter which is used to a considerable extent for food. When not quite ripe the fruit resembles fresh bread, being white and mealy and slightly tart. When baked it resembles plantain, being almost tasteless. It is also prepared for food by mixing it with cocoanut milk and serving with bananas. As the tree produces two or three crops annually and the several varieties bear at different seasons, the fruit can be obtained the greater part of the year.

The second consideration that should appeal to the stock raiser is the facility with which cattle could be shipped out the Orinoco River during certain seasons of the year. It would seem that this method was to be preferred to that of driving the cattle to the nearest point on the German railroad and freighting them to Puerto Cabello, which is the mode at present.

Just look at your map to get an idea of the extent of this section that can be made one of the greatest cattle-producing countries of the world.

The first view of the Llanos crushes the sense with awe like the sudden seeing of an unexpected ocean. Crossing the mountains there stretches before you a heaven-circled plateau of deepest golden green, splotched with shining silver from shimmering lagoons.

A mighty sun beats down in glittering splendor on the scene. Trailing herds of cattle moving like ant armies pass across the plains, while nations of wild white birds soar athwart the skies. Outlines of deeper green, like other islands in a verdant sea, mark the placing of the palm forests, while here and there spring solitary trees that stand like sentinels beyond the restless herds. The vastness of it all mocks the measure standards of the mind, filling your soul with that half fear, man's reverence to nature in her mightiness.

The grasses in this country are not excelled in their nutritive qualities by any of the Temperate Zone. The wonderful *granadilla*, standing like broom corn, tall and tender, is born of the showers of spring, while *carrerera*, named from the prairie goose that feeds on it, and *lambedora*, because of its softness, carpet the plains with a verdant luxury that withstands the hottest sun of the dry season.

And in these broad esteros the cattle can always find water by following the beds of the stream. At times, during the rains, there is too much water, part of the country seeming a vast sea, but this serves later to bring forth the wonderful growth of grasses already mentioned.

Live stock was introduced into Venezuela from Andalusia by the first Spanish settlers, and as early as 1804 it was estimated that there were more than 1,000,000 head of horned cattle and nearly 300,000 horses and mules. Within eight years, to the date of the outbreak of the war of independence, these had increased to 4,500,000, but in the struggle that followed, culminating in the battle of Boyaca, August, 1819, which signalized the end of Spanish power, it was natural that the herds, being the easy prey of both armies, should rapidly decrease.

In fact, the cattle industry might be likened to a barometer telling of peace and war in the Republic.

In 1823 the total number of cattle in Venezuela had been reduced to 250,000 head. However, conditions are so favorable for reproduction that they increased rapidly, and soon a growing export trade of

THE PORT OF GUANTA, VENEZUELA.

The city is situated on a landlocked bay of the Caribbean Sea, being connected by rail with the nearby port of Barcelona. Because of the natural advantages that Guanta possesses, it has obtained a large proportion of the commerce which formerly went to Barcelona, and is one of the principal centers for exports of live stock in Venezuela.



cattle, hides, and skins had become one of the sources of wealth. In 1831 some 1,825 head and 76,000 hides were exported, while fifteen years later the exports were 16,127 head, an average increase of about 1,000 a year, and in the same year over 400,000 hides were exported. The number of cattle sent out of the country from 1847 until 1855 varied between 13,000 and 15,000 a year, but in the early sixties the herds were decimated by the "*peste*," as the natives call a disease not scientifically explained.

There is a curious story told of the origin of this contagion, which attributes it to Providence, sent as a scourge to punish one TORRALVA, who was a prince of the plains, numbering his herds by the thousands, but being more interested in his horses, of which he had great numbers and of the finest breeds. One day while showing a friend the products of his ranch they stood on a small hill to watch what seemed an army of stallions and mares passing by. TORRALVA turned to his friend, saying, "Think you I shall ever want for horses?" "*Ni que Dios quiera!*" (Not even by God's will). The llaneros tell that shortly after uttering this blasphemy a mysterious disease appeared among his horses and spread, becoming general throughout the countryside. Within two years he was destitute. Thus began the *peste*.

But the evil passed, and in 1888 we have the number of horned cattle in Venezuela given as about 8,500,000, and the exports back to nearly normal figures. Looking at more recent reports, we find that during the fiscal year 1904-5 more than 80,000 head of cattle, with a value of over 6,000,000 bolivars (5 bolivars being almost a dollar), were shipped, while in 1905-6 the high-water mark was reached and little under 120,000 head were exported, valued at 8,600,000 bolivars. Of course, the recent difficulties have had their effect, and for the fiscal year 1908-9 the value of steers exported was something over 1,000,000 bolivars. However, those turbulent times are forever passed, we hope, and the future should hold nothing but peace and plenty for the people of this land.

To digress from dull figures, a description of "a bold maneuver" in handling cattle in this country is timely. I give it in the old-fashion phrases of RAMON PAEZ, a son of the Great Cowboy General and first President of the Republic.

Another method of arresting a bull in his flight is by a bold maneuver termed "*colear*," and which consists of availing themselves of the animal's tail to overthrow him when at full speed; but this is not easy of accomplishment, as the bull has then such entire freedom of movement. The horse also must be perfectly well trained to the hazardous undertakings and should obey instantly the slightest pull of the bit, for if the bull turns suddenly upon his pursuer, the chances are ten to one that the horse will be seriously wounded. The rider first gallops close to the rear of the bull and, seizing his tail with one hand, gives it a turn or two around his wrist to prevent its slipping. When thus prepared he urges his horse forward until the heads of the two animals are on a "dead

Courtesy of the Venezuelan Government.

CIUDAD BOLIVAR—VIEW ACROSS THE ORINOCO RIVER.

This important commercial city, the capital of the State of Bolívar, was formerly called Angostura. It is situated on the right bank of the Orinoco River, 373 miles by water from the sea. It exports large quantities of cotton, indigo, tobacco, coffee, and cattle.



heat," then quickly turning in an oblique direction, and exerting all his strength, he pulls the bull toward him, but does not relinquish his hold until he perceives that the enemy is tottering, when he is easily overthrown from the great impetus imparted by their rapid pace. Some men are so dexterous that they can "colear" with both hands at the same time, which necessarily gives greater power, enabling the rider to bring him down much more readily. The horse in this case, left to his own well-taught guidance, assists the maneuvers of his master, pushing forward at the instant he perceives that his master is prepared for the pull and turning about also at the right moment. * * * If too powerful resistance is offered at the outset by the bull, as is sometimes the case, the rider still clings to the tail of his adversary and throwing himself off the horse while at full speed, the impetus, combined with his weight and strength, never fail in bringing the bull like a fallen giant to the ground; then the man, quickly drawing the tail between the hind legs, awaits the arrival of his companions to assist in securing the prize.

The author is justified in calling this a "bold maneuver." With a knowledge of our own cattle country, it is to be doubted if the most "experienced hand" would try the above method of "throwing" a steer.

The cattle in Venezuela are the descendants of the original stock and no attempt has been made to improve the breed as in the Argentine Republic, except some tentative efforts by General CRESPO, when he was President, and one or two others, which met with little success for various reasons. However, there is no doubt but that with the introduction of blooded bulls a great improvement in the bovine stock could be effected that would result in a distinct financial gain to the exporter. Needless to say there are many other ways of increasing the income from a ranch by introducing modern business methods here.

The llanero is a picturesque type, cousin to our cowboy, but on the whole more peaceful. With his red and blue *cobija*, broad brim felt hat, and trousers wide at the shoe tops and narrow at the knee, like a sailor's, mounted he makes a striking picture on the plains. There is no more fearless rider and his dexterity in the pursuit of his perilous profession is proverbial. He sometimes carries an ancient carbine, but ammunition is scarce and the *garrocha*, a lance used in handling the bulls, is as much a part of his outfit as his lasso. Brave as these wild riders are by day and on their horses, they are cowards indeed at night, believing that the will-o'-the-wisp (*bola de fuego*) seen so often on the Llanos at night, is the soul of LEON DE AGUIRRE, who had come to the continent with PIZZARRO across the Andes to navigate the Amazon and then turned traitor against the Spanish authority and ravaged these plains, a very land pirate. Deserted by all save his daughter, he killed her so that none might say she was the offspring of a traitor. Awhile he wandered the forests alone, but at last was captured, hung, drawn, and quartered, and the llaneros will tell you that if you will look closely at the will-o'-the-wisp, you will see that it is AGUIRRE suffering eternal punishment.



STATUE OF GENERAL PAEZ, CARACAS, VENEZUELA.

José Antonio Páez, a famous general and President of the Republic of Venezuela, was born June 13, 1790, and died in the City of New York, May 7, 1873, on his return from a trip to Europe and North America. As a lieutenant in command of General Bolívar's cavalry, he greatly distinguished himself by capturing, with a detachment of 50 cavalrymen, a fleet of Spanish transports, this being the only case recorded in the annals of history of the capture of a fleet of ships by a body of cavalry.

We can not leave this country without a reference to the mirage, that curious phenomenon of suspension so frequent here. HUMBOLDT crossed this country in 1800 and speaks of seeing this wonderful sight then. Covering the ground more than one hundred years after one found almost the same picture in almost the same place—Calabozo, an ancient city standing in the center of the grass country. The sun was in its zenith, the sky without a cloud, while the mules ambled slowly along in the heat to where the city stood, the houses clustering round the church seeming some old castle set upon the plain. This point held our attention. Suddenly to the east the country was flooded with water of lightest blue, cutting the trunks of the palm trees 2 feet above the ground. It was a mere of gently moving waves, you thought, and with hope of water it might have lured you on; but when two cows appeared suspended above the horizon, you knew it was nature in a merry mood mocking you as a magician. And what made it more mysterious was that you saw no cattle on the prairie proper. Horses and cattle are sometimes seen inverted in the air. Once encountered in a dry desert country, it is easy to understand how the mirage filled the hearts of the hopeless with joy only to lure them so often to a fruitless, fatal march, for in spite of our knowledge that it must be an optical illusion, the inviting waters almost tempted us away from the town, our destination.

To get back to the practical, it might be that a packing house established at some suitable point on the Orinoco would be a paying proposition. An expert looking over the ground could quickly tell whether it would be better to establish a plant where the beeves could be locally treated and then shipped in cold storage, or if it would be preferable to continue shipping them on the hoof, as is now done. Many circumstances would have a bearing on this point and it could not be decided without a thorough investigation of conditions, so it is entered here merely as a suggestion.

The government monopoly of salt would have some bearing on the matter, and where the officials are so anxious to interest foreign capital matters might be arranged.

This article is put forward with the idea of turning thoughts to that treasure house standing just beyond our door.

Only one source of wealth is treated of, but this country contains many others, and already we can be said to be commercially allied to Venezuela, for it is the only country below the Isthmus where our own ships carry the most of our imports and exports.

In Venezuela one is everywhere treated with the greatest consideration and kindness and everyone, from the Secretary of Foreign Affairs to the casual companion of the wayside inn, is most thoughtful.

And one can look forward with lively anticipation to visiting this land that holds a thousand interests alike for the student of nature and the pioneer of trade.

NEW HOTELS IN CUBA^a

TRANSPORTATION companies operating rail and steamship lines to Cuba, basing their judgment on reports sent in from their various offices, have foretold for the winter of 1909-10 (November-April) the heaviest tourist travel to this island yet recorded. It appears that the desirable results of advertising, not so largely done by companies in Cuba as by those American tourist agencies and railroad and steamship companies which co-



HOTEL MIRAMAR, HAVANA.

Located at the juncture of the Malecon and the Prado, the popular promenades of the city, it is a favorite resort of the city's business men who come to spend a few minutes of rest after the day's labors, and of the tourists of both sexes who come to the island in large numbers during the winter. It is located directly opposite the band stand at the foot of the Prado, where concerts are given during the week, and faces Morro Castle, which guards the narrow entrance to the harbor.

operate with them, are now making themselves evident in flattering ratio to the outlay found necessary to make the attractions of Cuba as a winter resort somewhat known. Moreover, transportation facilities to and through the island have improved, as well as increased, and most influential in swelling the numbers of visitors, the hotel accommodations open to them not only in Havana itself but also in the provinces, are vastly superior now to what they were even last

^a By I. A. Wright, editor of the Cuba Magazine, Camaguey, Cuba.

season, to say nothing at all of five years past, when the Inglaterra was accepted as *ne plus ultra*, to suggest improvement on which was little short of vandalic.

W. T. BURBRIDGE, of New York, was the first to attempt to furnish Havana with a hotel acceptable to the class of persons who demand luxury in comforts during even a limited sojourn anywhere. He opened the Miramar, and it retains the popular favor at once bestowed upon it. It is the Delmonico as well as the Martin's of Havana. Its location is ideal, for it stands at the foot of the Prado, where that famous drive comes down to the sea, meeting the water-front boulevard (Malecon) at the band stand by Punta Castle, turreted, gray, and picturesque. Miramar is small. It is a bonboniere of a hotel, with rooms enough to accommodate only the most distinguished among the wealthiest visitors to Cuba. The dining room of the Miramar is the handsomest in the island. On its walls are panel paintings, by A. Rodriguez Morel, so exquisite in coloring one overlooks their faulty drawing. At the end of the salon is a raised gallery, which musicians occupy during dinner. Nevertheless, attractive as it is, this dining room is deserted save in stormy weather, for guests prefer the terrace or the gardens.

The terrace is the rendezvous especially of foreign residents at the hour when the sun goes down beyond Vedado, lighting all the intervening sea and the sky above to the zenith with flaring color. At the polished tables of native hard woods arranged along all the seaward side of the hotel one may find, between 5 and 6 on any afternoon, the leading business men of Havana; they are as unfailing in attendance as the habitués of a favorite club. Here, too, ladies, come from shopping or their afternoon drive for an ice or tea, are accustomed to meet to chat together. Before them passes as on parade along Malecon the endless chain of conveyances in which all Havana is "taking the air" at the sunset hour. Steamers entering or leaving port negotiate the narrow mouth of the harbor within a stone's throw of the driveway; or, again, it is a white-sailed schooner beating in under Cabañas, whose moss-patched walls glow pink in the evening light. As the southern night falls, thick and quickly whirling carriages and automobiles seen from Miramar become animated silhouettes against a burning background in the west. When the flame of sunset burns low and out their lamps are lighted till in the darkness they seem each a link in a running chain of intermittent glow. Now and then a touring car drawing up at the curb turns the inquisitive eye of its searchlight upon those at table. They sit long. It would be interesting to know how far to sea and over its wide waters the thoughts of the frequenters of Miramar go traveling in the hour they share together on its terrace. All alike feel the charm of that rare period in their day; they will remember it through

years and distance, when they have scattered whence they came—to England, to Canada, to Germany, and Carolina—yet none could explain it if they tried. Whatever it is it is peculiar to that particular place only at sunset and through the twilight immediately following; when the *maître d'hôtel* motions on the electric lamps in the portico ceiling the spell vanishes in the flash and the terrace is at once deserted by the initiated in favor of outsiders who prize it solely for the excellence of its beverages and of the course dinners which may be served there, or in the gardens where little red lamps burn on tables in rustic pagodas and arranged along balconies overlooking a small



HOTEL SEVILLA, HAVANA.

Situated near the Central Park, it has become a popular stopping place for commercial men or those on pleasure bent who visit the city and who desire to obtain the high class of accommodations to which they are accustomed in the larger northern cities.

sanded arena littered with chairs so placed that the crowd may view moving pictures thrown on a screen above—all out in the balmy, open air. The picture these gardens present, especially of a Sunday night when “all the world” brings his lady along, is more varied and more interesting than any the cinematograph throws.

The Sevilla was Havana's second really good hotel. It stands opposite the great palace erected by the clerks of commerce for their club. It is within a block of the Prado. The building has a touch of the Moorish. Its architecture is eminently suited to Cuba's climate. The corridors are tiled, white walled, high ceiled, and cool. The rooms have all these desirable qualities. The dining room is

pleasant and airy. Last season, under the management of Col. A. E. DICK, the Sevilla attained a place peculiarly its own in Havana's regard. It was at the Sevilla that the foreign colonies and Havanese society united with the guests to celebrate Lincoln's Birthday at a dinner which brought out more good-looking women in handsomer gowns than had been seen together on any one occasion within the memory of the oldest beau present. Colonel DICK will not return this coming winter, and no plans for any similar entertainments have been announced.

Hotel Plaza, angling up to Central Park at the corner of Zulueta and Neptuno streets, has not had a dull day during the summer, for it has attracted to itself the best elements of what might be called a permanent floating population—Americans and English, men and their wives, who do not keep house, but board at whatever hotel affords the most gayety. The Plaza is also widely and favorably known among traveling business men who visit Cuba from time to time. Capt. WALTER FLETCHER SMITH has secured control of the establishment.

The Plaza is unique among Cuba's hotels in that it has its dining room on the top floor, overlooking the lively square of Central Park through wide and numerous windows. This salon is converted from time to time into a ballroom. It was here that the charity ball was given when the hotel was about to open its doors to the public.

The Plaza is the most beautiful of Havana's large hostellries. It is also the most completely equipped, and the details of its interior decoration and service are in the best taste. It was modeled throughout after the Plaza Hotel in New York, and its silver, china, glass-ware, etc., came from the factories which supplied its namesake.

The Plaza, until very recently, completely humbled the famous old Inglaterra, looking upon Central Park from the opposite side. The Inglaterra's owners, however, determined not to be outdone, closed that house this summer and have been very busy adding a top story, remodeling and refitting it throughout. It will be open for business by the time the coming season is well on.

The Pasaje, a hotel owned by the same persons who own the Sevilla, and the Inglaterra as well, is enlarging and bettering itself as far as is possible. The Telegrafo, Florida, and the Grand Hotel Havana remain as they were. Neither has the Louvre, on San Rafael street, which never loses a friend really acquainted with its excellencies, shown any activity calculated to acquire new patrons; the fact is, this house, little known save to the experienced traveler in Cuba, has not room for more than its present clientele.

Hotel Trotcha is in Vedado, the salubrious and aristocratic suburb which has developed, especially since the advent of the electric street-car line, on the seashore west of the city proper. The hotel, like the



ENTRANCE LOBBY, HOTEL PLAZA, HAVANA.

The lobby opens toward Central Park. The hotel is modeled after the famous Plaza Hotel in New York City, and maintains the same high standard for comfort and elegance.

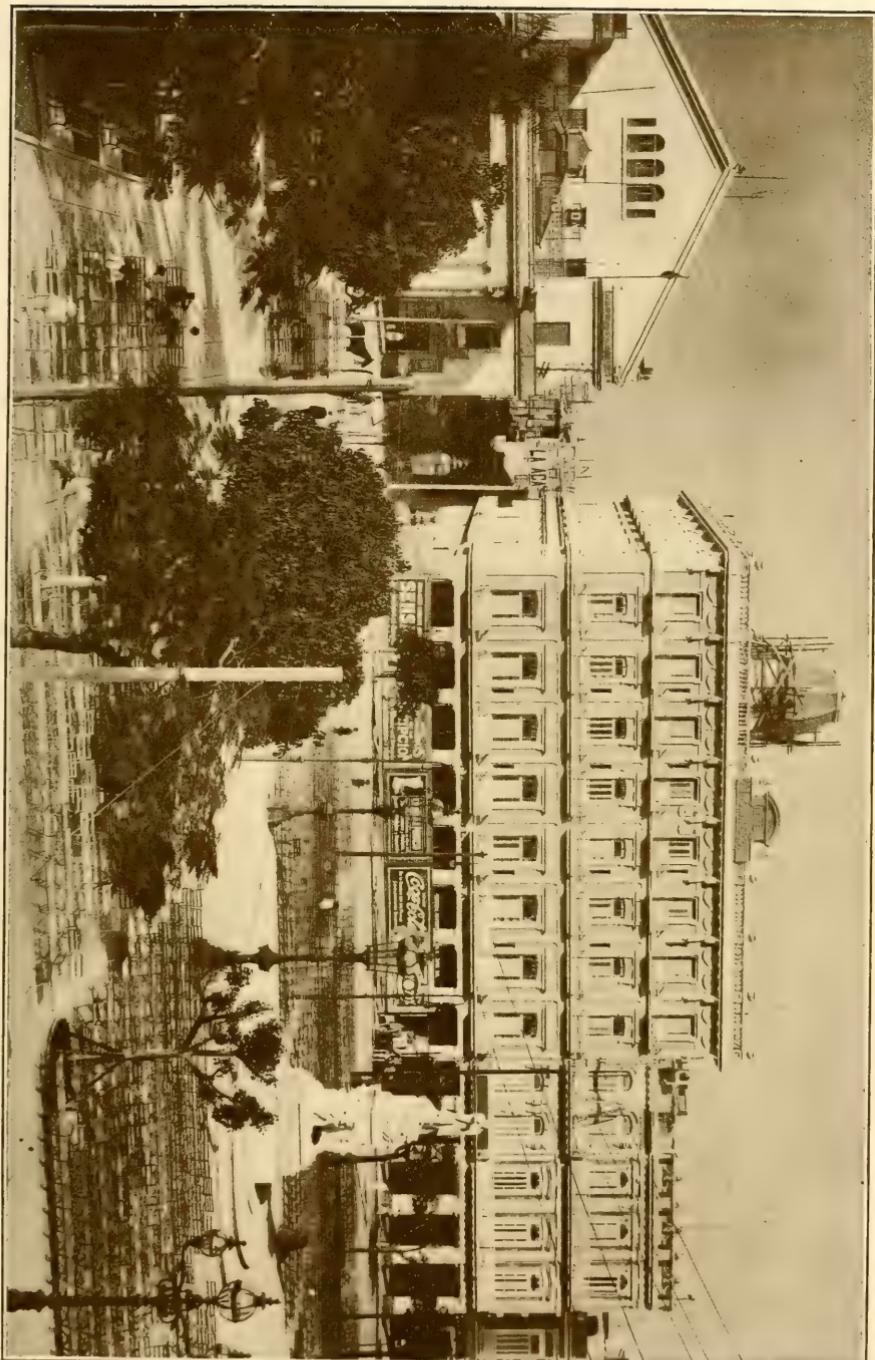
dainty blue and pink and purple villas which surround it, is embowered in gardens. It is a rambling, peculiar structure, consisting of three parts, the main edifice and two annexes, known, according to the custom here of bestowing definite names on buildings, as "Washington" and "Eden."

The Trotcha figures in Cuban-American history. It was here that the committee on evacuation had its lodging during negotiations ending the Spanish-American war. Later, just prior to his removal to the palace, Governor Brooks ruled Cuba from quarters in Hotel Trotcha. After his departure his leading officers remained. The Trotcha has, ever since, been the favorite hotel of army and navy personages visiting Cuba, as well as of foreign diplomats and visiting embassies.

The era of improvement in hotels is working reformation even outside Havana. At Santiago de Cuba the Casa Granda has found it necessary to enlarge its present quarters on Cespedes Park, adjoining the San Carlos Club on one hand and near to the cathedral on the other. This hotel was a godsend to Santiago; it is kept spotlessly clean throughout, and baths are available. The cuisine is excellent, and the *al fresco* dining room, on a very wide balcony overlooking the principal plaza of town, is delightful. It is the favorite lounging place of leading Americans and English in the oriental capital. Directly opposite is Hotel Venus, the best known, along with Havana's Inglaterra, among all hotels in the country; the Venus has kept the pace and recently made extensive improvements.

At Camaguey, the Cuba Company's hotel Camaguey has recently changed management. This hotel is the largest in Cuba, for the building it occupies covers a city block; it was originally a Spanish barracks. Its *patio* is a brilliant tropical garden, where one may pluck in the open the same purple orchids one pays \$1.50 each for in New York. The corridors of this hotel are so wide six horsemen could ride their length abreast. The rooms are furnished plainly, in excellent taste. Plenty of pure water is supplied by an artesian well. In the rear the hotel has its own vegetable garden and chicken yard. Fruits are always on hand. The railroad company, which owns it, operates this hotel not so much to make money from it as to make travel on the Santiago through line from Havana comfortable. Travelers break the trip from Havana to Oriente with a day's stop in Camaguey, noted for its hoary churches and its interesting rôle in American history.

Away out west, in Pinar del Rio City, Hotel Ricardo has been rebuilt. It was formerly a ramshackle frame, good as provincial hotels went, but hardly satisfying to exacting visitors. Now it is a good-looking concrete-block building, with tiled floors, running water, hot and cold baths, and, among its chamber furniture, great cedar-



HOTEL INGLATERRA, HAVANA.

This faces Central Park, the center of the tourist district. It was for years the leading hotel of the city, and has lately added improvements which will make it the equal of the new modern structures which have recently been erected.

lined wardrobes that perfume the entire room when opened. The dining room has been rearranged and the cuisine is planned to suit foreigners. The Ricardo anticipates the arrival there of many parties of Americans touring *en automobile* this winter, now that the "cart roads of Mister MAGOON"—macadamized government highways—are completed through from Havana to Guane, making accessible from Pinar del Rio City all the strange, rock-encircled valleys of the weird northwest.

The list of Cuban hotels would indeed be incomplete without mention of Hotel Campoamar (Field of Love) in Cojimar, a little town



HOTEL RICARDO, PINAR DEL RIO, CUBA.

This hotel has recently been rebuilt and now contains all the modern improvements of a first-class hotel. It is the leading hotel of the western province, which can now be easily reached since the completion of the new macadamized roads.

across Havana Harbor, and 2 miles eastward on the coast as the crow flies. While somewhat inconvenient of access, perhaps, except to those traveling with motor cars, its wonderful situation and fine rooms and baths make it an ideal spot to waste a week in healthful indolence.

Into the little harbor rolling away from the foot of the hill, on which the hotel stands, the British sailed in 1762, and from here began the attack that was to give them possession of Havana for a year. Now a fishing fleet makes sail at dawn from the same harbor, returning with shining silver freight to feed the Capital.



HOTEL CAMAGUEY, CAMAGUEY, CUBA.

This is the largest hotel in Cuba, covering the area of a city block. It is noted for its beautiful patio filled with tropical fruits and flowers. It is a favorite stopping place for travelers passing through the island.

A TRIP TO PAULO AFFONSO FALLS IN BRAZIL^a :: ::

FEW tourists ever have more than a glance of a very small section of Brazil, as they travel by large steamers which only touch at the more important coast cities and they accept, without question, the volunteered advice of resident fellow-countrymen who have never traveled in the interior of the country. These speak as if from personal knowledge, though in reality falsely, of the difficulties, if not danger, to such travel.

Though there is individuality in all cities, more striking in some than in others, yet after all, as a result of civilization, there is so marked a similarity that one soon tires of most foreign cities. This monotony seldom extends to travel in the interior of a country, at least not in Brazil which abounds in enchanting scenery, remarkable plants, flowers, and animals, and marvelous works of nature, giving to the traveler a new sensation at every turn. Such is the effect of a trip to the Paulo Affonso Falls.

To reach Paulo Affonso Falls it is necessary to take a coastwise vessel from Pernambuco or Bahia to Penedo, about 30 miles up the wonderful San Francisco River, which is navigable, except for a short distance on both sides of the falls, for over 1,000 miles into Brazil, and is full of interest from mouth to source.

Penedo is the second largest city in the State of Alagoas. Situated as it is at the head of navigation for ocean-going vessels and being a federal customs port, it is quite an important commercial center. It controls the trade of the lower San Francisco and furnishes to the adjacent territory provisions and manufactured goods in exchange for rice, beans, sugar, cotton, hides, and skins, which it ships to the larger Brazilian centers, though it sometimes exports direct.

Viewed from the anchorage, the city of Penedo is quite pictur-esque located on ground sloping upward from the river. Its several churches towering above its many colored stucco buildings,

^a By Honorable H. W. FURNISS, United States Minister to Haiti. Photographs by the author.

chiefly one storied, break the sky line and give a most pleasing effect to the picture. Along the water front are moored various types of water craft, some of which, as they are peculiar to the section, attract particular attention.

Almost opposite Penedo is the ancient town of Villa-Nova in the State of Sergipe. The town is said to have once been an important place, but now chiefly consists of tumble-down houses. A large rice-hulling factory is, however, located here, also large cotton-seed and castor-oil factories and a cotton gin. The products of these factories are shipped to near-by towns.

From Penedo to Piranhas, the head of navigation of the lower San Francisco, or that part of the river below the falls district, one



THE QUAY AT PENEDO, BRAZIL.

Penedo is the second largest city of the State of Alagoas. Situated on the San Francisco River, about 30 miles from Bahia and at the head of navigation for ocean-going vessels, it is an important commercial center and has a large export trade.

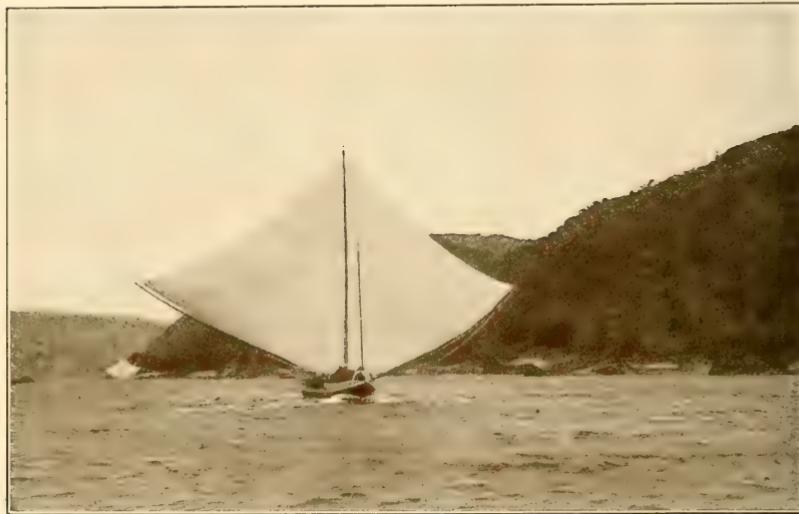
has choice of making the trip either by small double-decked light-draft stern-wheel steamer, which makes a round trip once a week, or by a locally built native sailboat called "canoa."

Canoa is Portuguese (the language of Brazil) for canoe, which it resembles in outline, but differs therefrom in having in the forward third a peculiarly shaped palm-leaf-thatched cabin with dovecot-like windows painted a dark color, contrasting with the other woodwork. Other than a shelf-like affair running around on a level with the windows and used either as seat or bunk, as occasion warrants, the cabin has no furnishings. The rest of the boat, except an area over the rudder on which stands the helmsman, and the small space occupied by a built-in box filled with sand, on which the cooking is done,

is utilized as cargo space and is sufficient to carry from 10 to 20 horses or oxen, packed crosswise like sardines.

The size and character of the boat does not appeal to our idea of a canoe. Such a boat, with its crew of two men, can be chartered at a reasonable figure, while frequently a passage can be arranged for at a reduction on steamer rates.

Whether to take steamer or canoa is difficult to advise; that would depend upon the temperament of the traveler, the company, and the circumstances. In the various trips of the writer, steamer or canoa has been used, in accord with mood or necessity. As to time, one method is about as quick as the other, each consuming two days in



CANOAS UNDER FULL SAIL.

This native boat is much used for transporting freight and passengers on the large rivers of Brazil. The forward part contains a cabin for the use of passengers, and the balance of the boat is used for freight. On the way to Paulo Affonso Falls the wind blows upstream during the daytime, and the boats often make better time than the regular steamers. On the return trip, the voyage is made downstream at night, the current being extremely swift and the wind ceasing to blow after sundown.

going the 150 miles, and like time in returning. The steamer remains at Piranhas but one day, so that, unless it is desired to consume a week in the neighborhood of the falls, the canoa offers the only quick return to Penedo. On the steamer meals are procurable, while on the canoa provisions must be supplied by the voyager or arranged for with the captain. In either case it is wise to take some prepared food, as the cooks make chiefly native dishes, which require an educated palate for appreciation. Whether by steamer or canoa, unless mosquito proof, one must of necessity have a mosquito bar; a hammock or camp bed is a wise provision. In the daytime mosquitoes are not troublesome, but with the setting of the sun, when the boats usually tie up for the night, they become excessively annoying.

Voyage by canoa is both romantic and thrilling. Every day, commencing about 10 o'clock, off Penedo, a stiff breeze arises and blows upstream with such force that the canoas, with their large sails spread, resembling at a distance huge bats, seem to fly upstream, frequently with such speed as to overtake and pass the steamer, which has left some time before. The river is practically straight, and the farther up one goes the more it is hemmed in by the hills along its banks, so that the canoa has the full benefit of the breeze, which follows the turns of the river.

On the trip upstream it is thrilling to watch with what facility the helmsman avoids submerged rock or steers in and out among the



PIRANHAS, BRAZIL, LOOKING TOWARD PAULO AFFONSO.

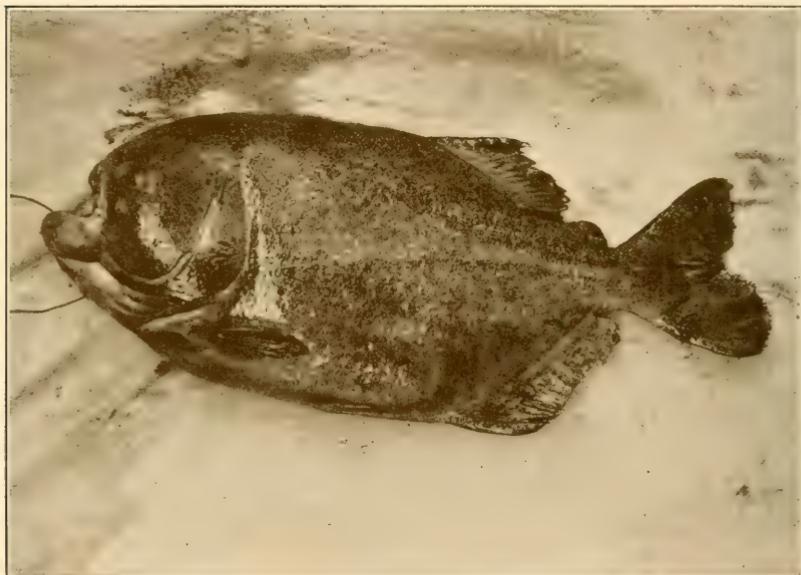
This picturesque village is situated at the head of navigation of the lower San Francisco River. A railroad connects it with Jatoba, above the falls and 71 miles distant, where navigation on the river is resumed.

many rocky islands. At night the canoa ties up to await the next day's breeze, though if the moon is shining the canoe man may pole the canoa for some distance, keeping time with his improvised verses and the half doleful tune of a small guitar or an accordéon in the hands of his companion.

Downstream travel by canoa commences as soon as the day breeze dies out. This is, therefore, chiefly at night. The motive power relied upon is the current of the river, which is very swift, its force exerting itself upon a large bunch of thickly leaved shrubs which is tied on a rope about 10 feet long and thrown overboard. The bunch of shrubs precedes the canoa and is pushed by the current, thereby rapidly pulling the boat downstream. It is necessary for the boat-

man to be always on the lookout and ready with a long pole to shove the boat through the shallow water, over a sand bar, or around a particularly sharp curve in the channel. It is wise to have a musical crew as, with their singing, there is less likelihood of their falling asleep and of the boat being found next morning stuck in the mud a few miles from the starting point, as was once the writer's experience.

Between Penedo and Piranhas there are several towns of importance, the chief of which are Propria and Gararu, in the State of Sergipe, and S. Braz, Traipu, and Pao d'Assucar, in the State of Alagoas. All of these places are of sufficient interest to warrant short stops. They are the river ports of large sections in which cotton,



"PIRANHAS" OR SCISSORS FISH.

This fish inhabits the San Francisco River in large numbers. It is of a carnivorous disposition and frequently attacks animals coming to the river to drink.

beans, corn, rice, and cattle are raised in large quantities. Rice is chiefly raised along the river itself and in the ponds formed adjacent thereto when the river is in freshet.

Pao d'Assucar is so called because of a large hill on the river front which resembles a sugar loaf, but, unfortunately for the town, it acts as a barrier to the wind and causes the sand to be thrown up in such quantities that the portion of the town adjacent thereto has to be periodically excavated.

Piranhas is a picturesque village built in terraces around the curve of a practically barren hill. At this port one hears much of the "piranhas," or scissors fish, a terror along the whole San Francisco River, though said to be in greater numbers here than elsewhere.

This fish has a peculiar shaped head with serrated teeth bent backward. It is of carnivorous propensities, frequently attacking and biting pieces out of animals which go down to the river to drink. Even men are said to have been victims to it.

From Piranhas there is a railroad to Jatoba, 71 miles distant, where navigation for the upper San Francisco is resumed. A little more than halfway to Jatoba is the Falls Station, a desolate place with only a closed station house surrounded by a thicket, travel to the falls being too light to warrant even a caretaker. It is best, therefore, to stop at Pedras, a small village reached just before the station. Here guides, horses, and food can be procured for the rest of the journey, which will take from two to three hours' riding.

The ride to the falls is best made very early in the morning, otherwise the heat is so intense that the trip would not be enjoyable. The road is frequently through dense thickets in which are found oncas (*felix concolor*), small wild cats, deer, preá (*cavea aperea*) a ratlike animal hunted by the natives, wild hog (*dicotyles*), several varieties of small monkeys, and birds. Here parrots, paroquets, wild pigeons, and doves occur in flocks. In the dry season snakes, particularly rattlesnakes, are seen in great numbers, doubtless due to the drying up of the short, stiff grass, which renders them more visible.



CARVÁ, A VALUABLE FIBER PLANT OF BRAZIL.

At present this plant is used only by the natives for making a kind of cord, but it will no doubt become of commercial importance on account of its great drought-resistant qualities.

Propria.



Sao Braz.



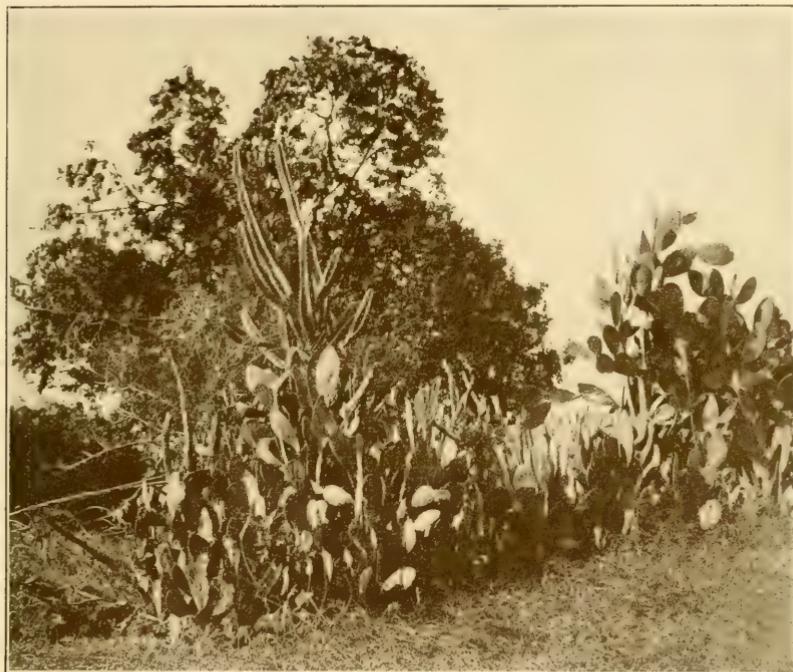
Traipu.



Pao d'Assucar.
NATIVE VILLAGES ALONG THE SAN FRANCISCO RIVER ON THE ROUTE TO PAULO AFFONSO FALLS.



On the roadside are innumerable cajú trees (*A. occidentale*), with their yellow or pink fleshy, pearlike, sweet, but astringent fruit, with its odd-looking kidney-shaped brown nut projecting therefrom, giving a striking suggestion of "Punch." The tree is very utilitarian. The fruit is considered a blood purifier; the nut, when raw, is dangerous to eat, both because of its caustic properties and the poisonous juice contained in the shell. Upon roasting it both these are driven out by the heat, and the nut then is delicious. The gum of the tree, obnoxious to insects, is used for binding books, while the leaf crushed in water forms a powerful intoxicant.



CACTI AND SHRUBBERY NEAR THE PAULO AFFONSO FALLS.

The country in the region surrounding the falls is barren of trees and covered with low, spine-covered plants and trees.

Flourishing throughout the thickets of this section is the thorny imbuzeiro, whose luscious, green, plumlike fruit is just sour enough to be most refreshing. There also occurs an abundance of "pinha" (*A. cherimolia*), a fruit resembling a fleshy, green pine cone and enjoyed by most people.

Journeying on, the character of plant life is constantly changing until, when near enough to hear the dull rumbling of the falls, the country becomes almost desert-like. Tall trees have disappeared, and all that seems to thrive are low shrubs and plants armed with spines, as if for protection against invasion. To such an extent is this true

that the cowboys of the section of necessity wear full suits of thick leather and their horses are protected by leather breastplates and frequently with leather anklets and face coverings.

Several fiber plants of great commercial worth grow abundantly in this section, but other than making a few cords for local use, nothing is being done with them. There is the caroá (*neoglaziovia variegata*), half round, light green, white banded, snakelike, belonging to the pineapple family, producing an excellent fiber and flourishing regardless of droughts. Then there is the macambira, another of the pineapple family, with leaves protected by stout incurved spines upon



COWBOY OF THE PAULO AFFONSO DISTRICT.

Owing to the country in this section being filled with cacti and other thorn-covered plants, these cattle-men wear complete suits of leather, and even their horses must be protected with leather breastplates, anklets, and face guards.

their edges, thereby rendering handling both difficult and dangerous. There are many of the fleshy leaved "gravitas" (*agave*) with their long perpendicular flowered stems topped with white flowers which, later on, will be followed by young plants having the appearance from a distance of hovering birds.

The cactus family is well represented, from the little dwarf quipá to the treelike mandacarú (*C. brasiliensis*) with its long straight trunk 20 to 30 feet high, covered with stiff thorns and its whorl of almost perpendicular branches at the top, towering above surrounding vegetation and with trunk durable enough for use as hut rafters. Then there are masses of a beautiful candelabrum-like cactus, while

the flat cacti (*opuntia*) occur in several varieties; some a mass of fine prickles, producing a velvetlike appearance; others with coarse spines and still others practically spineless, which are eaten by the cattle when more desirable forage becomes exhausted in the dry season. cantaloupe shaped, with rows of spines on its ridges and having a red figlike fruit of the others are enjoyed by many persons.

There also occur adjacent to the falls thousands of plants of a variety of melocactus (locally called "cabeça de frade,"—priest's head), cantaloupe shaped, with rows of spines on its ridges and having a red



THE RIVER JUST BELOW THE LAST FALL.

After the great final leap of the combined waters of all the branches of the river, the stream strikes an enormous rock at great speed, causing the formation of an enormous whirlpool.

topknot resembling a Turk's fez. A peculiar sensation passes through one who, crossing a ravine, suddenly looks up and for the first time sees on a rocky ledge, practically devoid of other vegetation, a row of these cacti in silhouette, suggesting human heads.

Paulo Affonso seems to have moods, its appearance markedly differing with the seasons or, more properly speaking, with the volume of water in the river which is dependent upon season. The writer has made the trip there at the three principal stages of the river and notes that the cataract itself does not change much in form as a result of volume of water. However, when the river is in freshet

additional cataracts are formed by the water passing through the ravines, which at other times are dry, and leaping over the high cliff direct into the lower whirlpool. The rapids, on the contrary, are materially changed by any deviation in the volume of water and, were they approachable when the river is high, they would doubtless be devoid of the great beauty which characterizes them at other periods.

The ideal time to visit the falls is just after the river has fallen sufficiently to allow one to cross the numerous rocky ravines through which, when the river is high, water is rushing, preventing a near



ANGIQUINHO FALLS, FORMED BY ONE OF THE FIVE BRANCHES OF THE RIVER WHICH UNITE AT THIS POINT.

From the small island in the center the water makes a leap of 72 feet to join the main body at the "Mai do Cachoeiro" (Mother of the Falls), which then descends with a mighty roar a distance of 190 feet.

approach to the true river bed and the falls. Soon after the freshet, which is from November to March, the grass springs up and the plants burst into bloom. Gaudy colors then predominate, from the deep yellow of the trumpet flower, the reds and blues of other plants, the beautiful pink flower of the "cebolla brava" which, when eaten causes the death of so many animals, to the black seed pod of the "blackwood" bush and the exquisite white bloom of the "cereus" which pops open at night exhaling its delicate but penetrating odor. After a few weeks the dry season sets in. The grass and ephemeral flowering plants are then soon scorched by the sun, leaving only a few hardy bushes and the cacti.

Consisting as it does of a succession of rapids ending in a fall, opinion differs as to which point about Paulo Affonso one should first visit. To the writer the most beautiful and awe-inspiring portion is the rapids. One in viewing them realizes the truth of the words of a noted traveler, that "if Niagara be the Monarch of Cataracts, Paulo Affonso is assuredly the King of Rapids." Either as rapids or falls, it stands unique. It has none of the artificial surroundings of Niagara, neither parks, houses, nor work of man. Instead, it remains unadorned, as it has been for centuries, with its almost barren banks standing like walls and more resembling cast



THE SOUL-INSPIRING RAPIDS.

Before reaching the main falls, four branches of the river descend in a series of cascades, the water dashing over the rocks as if in a hurry to reach its final leap at the "Mai do Cachoeiro" (Mother of the Falls).

iron than as they are in reality rock painted black by the iron and manganese held in solution by the water when the river is in freshet.

Living near the falls are a few men who, knowing the most accessible footpaths to the various points of interest, will act as guides for a small fee. However, they are not obtrusive or insistent in proffering their services; on the contrary, one has to make inquiry to find them.

The route usually taken by the guide leads first across several ravines with sides of polished rock varying in color from the natural red to a dull or bright black. In these ravines are numerous interesting cavernous potholes turned out of the rock and polished by

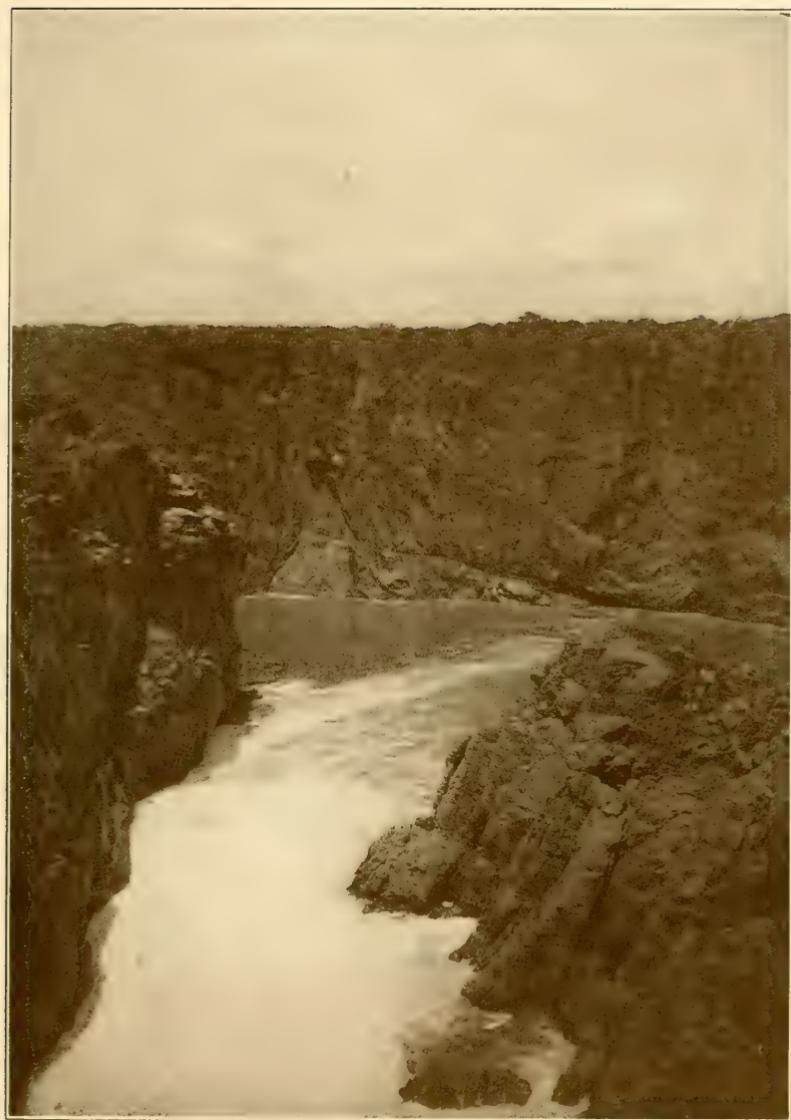
the action of water and gravel. These potholes frequently contain beautiful polished stones of various colors, some very much resembling gems.

Continuing, the route passes near the rushing, leaping, surging, foaming water of the rapids which descend for a distance of a couple of hundred feet. Finally one reaches a rock overhanging the "Mai da Cachoeira" (Mother of the Falls), so called because all the waters of the different branches of the river here unite to take the final grand leap. From this point the view is so sublime as to defy proper description. Facing one is the Angiquinho Falls, inclosing a small rocky island covered with verdure, in and out of which dart a multitude of swallow-like birds. These falls are formed by a branch of the main river, which it leaves some distance above, making a wide detour, and then with a short leap falls on ledges of rock forming cascade upon cascade, uniting at a right angle with the rest of the river at the Mai da Cachoeira many feet in advance of its initial leap. The island formed by this detour is always green with vegetation, the result of receiving the spray of the rapids wafted over it by the breeze which comes up the river.

From this same view point, looking to the right, one has a bird's-eye view of the wonderful rapids, while by lying prone upon the rock, holding on to a bush for safety and leaning over the ledge—quite a dangerous feat—one looks down from a height of 72 feet upon the foaming milk-like mass of the combined waters of the Mai da Cachoeira and views with a feeling too awe inspiring to be pleasurable, the last leap of 190 feet.

The falls are slightly crescentic in form. The main body of water rushes down the steep incline of the last rapids to the Mai da Cachoeira, where it hurls itself with great momentum against a steep black wall directly in front of it, rebounds, swishing, swirling, churning, and foaming, only to be pushed over the abyss, at a right angle to its original course, by the dancing, foaming waters of the Angiquinho before the water can recover its natural appearance. The width of the river at this point is about 50 feet, and the depth of the water at the base of the falls is given as 86 feet. The river then rushes straight on for a few hundred feet, only to be hurled back by a rock wall 300 feet high, forming the lower whirlpool, from which it finally escapes at a right angle and passes for some miles through a narrow gorge.

The guide next leads one to the river above where, hemmed in by low banks of black rock, it is broad and quiet, with nothing to suggest the turbulent waters just left. Continuing upstream, one sees numerous islands, mere rocks projecting like monuments from the water, and notes that already the water has commenced to hurry.



THE SAN FRANCISCO RIVER BELOW THE FALLS.

After leaving the turbulent lower whirlpool, the river flows swiftly for some miles through a deep and narrow gorge.

A short distance below the river makes its first leap of 30 feet. This is followed by the "Vai-vem de Cima" (upper come and go), a miniature whirlpool, where the water ebbs and flows at oft-repeated intervals. Farther on, the rock banks of the river approach each other and through clefts in the rock the river is compressed into five narrow branches, four of which immediately start their descent by tumbling 15 or 20 feet and, becoming a mass of seething foam, rushes down the steep incline with a fury that almost causes the earth to shake and with a roar that can be heard for miles, thus forming the soul-inspiring rapids.



THE BEGINNING OF THE RAPIDS, ABOVE THE MAIN FALLS.

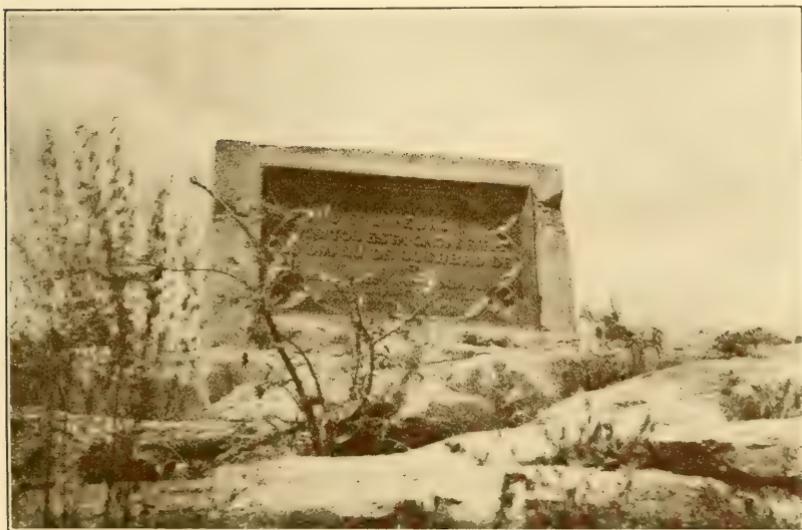
Some distance above where the united river makes its last great plunge, it divides into five branches, four of which rush through narrow, rocky ledges and descend with a mighty roar which can be heard for many miles.

The water seems to be so anxious to get below that in some places it dashes itself against the rocks only to fall as a mass of spray; in other places huge rocks in its course are one instant covered and the next one bare, as if the river was playing "leapfrog" with them, while in still another place a wide gap in the river bed is jumped, thereby forming a veritable cave with water covering.

After a short distance the four branches unite and with increased speed rush down to the Mái da Cachoeira. Here it is joined at an acute angle by the fifth branch which, after having run on a ledge for a short distance high up above the rest of the river, abruptly changes its course and tumbles down ledge after ledge in cascade rapids.

The guide then conducts one by a circuitous route over sharp stones, thistles, cactus, and through dense, thorny bushes to the spot where a clearing was made more than half a century ago for Emperor Dom PEDRO to view the falls, and with his machete will cut away enough of the prickly growth to permit one to see the stone placed there in commemoration of the imperial visit.

Tourists to Paulo Affonso are rare, and as the view point is on the brink of the perpendicular stone bank of the river, 300 feet above the water and slightly higher than the river bed above the first leap, it is too high to be kept clean by the floods of the river, and a clearing will have to be made for one. From this view point one looks at the



MONUMENT COMMEMORATING THE VISIT OF EMPEROR DOM PEDRO TO PAULO AFFONSO FALLS.

falls down a narrow, winding canyon. A part of the falls is hidden by the stone bank on the opposite side, and the rest of the falls is too distant to be seen at an advantage. It is regrettable that the opposite bank of the river is so inaccessible.

According to the guide, the trip to Paulo Affonso would not be complete without a visit to what he styles the wonderful "Furna do Morcego" (bats' cave). To see this one is induced to climb, crawl, and, if not very careful, fall down the zigzag path leading to the edge of the lower whirlpool where, after literally scrambling over the rubbish thrown up by it, one is conducted to the large gaping entrance to the cave. The cave itself is disappointing. It is nothing more than a large opening in the bank, and is uninteresting unless one excepts the great number of vampire bats which inhabit it. These are very troublesome to the cattle raisers in the vicinity.

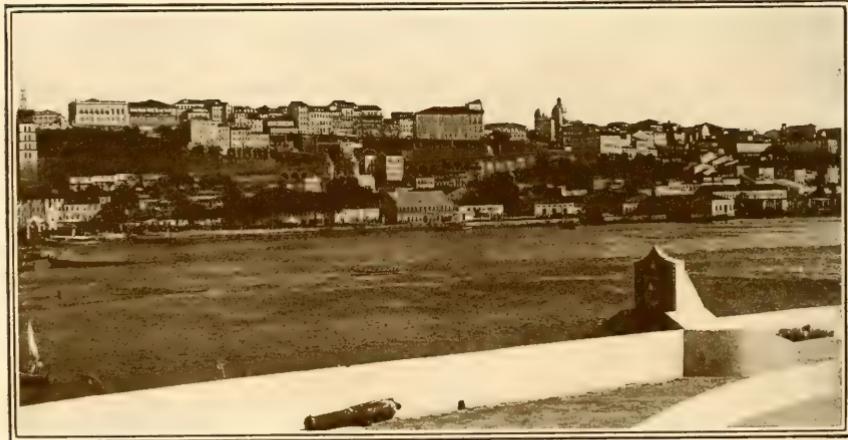
The floor of the cave is always above the high-water mark, but the entrance thereto is unapproachable at that time; in fact, water is then falling over the bank in which the cave is situated.



THE VAMPIRE BAT.

Large numbers of these vicious animals inhabit a cave at the lower whirlpool of the falls, the entrance to which is covered at high water. Their well-known blood-sucking propensities make them a nuisance to the neighboring cattle raisers.

From the mouth of the cave one has a good view of the whirlpool, but with thoughts of the difficult climb necessary to return it is doubtful if this side trip has been worth the trouble.



LATIN AMERICAN MUNICIPALITIES

LA PAZ.

WHAT is the capital of Bolivia? It is said that this question was once asked of a distinguished Bolivian, and his answer was, "The back of the horse on which the President rides." But things have changed in Bolivia. In no State of South America has the growth of a true republican spirit, working through the regular constitutional channels, been more rapid than in the once hermit State of the high Andes. The President is the chief executive, but not the whole government. Congress and the Supreme Court have taken their places by his side, so that the three together constitute the triple-headed form of government which is the fundamental characteristic of all the twenty-one Republics of America and which sharply differentiates them from European Republics, ancient or modern. In the Bolivia of to-day the balance between the executive, legislative, and judicial powers of government is well kept, so that it can no longer be said that the capital is where the President may happen to be. But this fact does not remove the difficulty in answering the question as to what city is the capital of Bolivia. By a law, more than 80 years old, Sucre is the official capital, and the Supreme Court of the Republic meets there, but the President resides in La Paz. Congress has for a number of years held its sessions there, and in La Paz the foreign ministers accredited to the Government are stationed, so that in all fairness the Paceños may claim for their city the title of capital of the Republic.

Like Mexico and Quito, La Paz antedates the white man's advent on the American Continent. It antedates even the Inca civilization which PIZARRO and his followers found stretching along the west coast of South America and which had its center at Cuzco, not far from the Bolivian frontier. As Chuchiabo, it was a famous town in the old Aymará kingdom. Under Inca dominion it was called "Chuquiapu." The Spaniards called it "The City of Our Lady of Peace" (*La Ciudad de Nuestra Señora de la Paz*). After the war of independence the name was changed to La Paz de Ayachuco, but to the residents for nearly four hundred years it has been and is simply La Paz, the city of peace.

La Paz as a Spanish city was founded in 1545, in commemoration of Sacsahuana, one of the many armed conflicts which took place among the Spaniards themselves in that ignoble scramble for gold and power which immediately followed the overthrow of the Inca empire. At Sacsahuana, GONZALO PIZARRO, brother of FRANCISCO PIZARRO, the conqueror of Peru, was defeated by PEDRO DE LA GASCA. On October 20, 1545, just one year following the defeat of GONZALO PIZARRO, he in the meanwhile having been put to death, ALONSO DE MENDOZA, by order of DE LA GASCA, founded the city of La Paz. This was twelve



A SECTION OF LA PAZ, BOLIVIA.

La Paz is one of the most picturesquely located cities of the world. Perched in a cleft of the Andean range, 12,500 feet above the level of the sea, it is walled in on three sides by mountains towering above the cathedral spires, while in the distance the sparkling summits of Illimani and Sorata rear their snowy peaks against a cloudless sky, forming a scene as awe inspiring as any in the world. This quaint but progressive commercial City of Peace is in easy communication with the Pacific coast.

years after the first landing of FRANCISCO PIZARRO on the coast of Peru in 1533, and two years after the creation of the vice royalty of Peru in 1543. The vice royalty was divided into two audiencias—that of Lima for lower Peru and that of Charcas (now Sucre) for upper Peru (now Bolivia). La Paz was in the audiencia of Charcas. In 1605 La Paz was created a bishopric. In 1776 the vice royalty of Buenos Aires was created, to which was attached the audiencia of Charcas. This separated Alto Peru from Peru and brought La Paz under the government of Buenos Aires. The audiencia of Charcas was, in 1782, divided into

four Provinces, of which La Paz was one, then including territory now belonging to Peru. These Provinces were governed by intendentes appointed by the King of Spain.

During all the colonial period down to the war of independence the audiencia of Charcas, or upper Peru, was one of the most turbu-



(Courtesy of the National Geographic Magazine.)

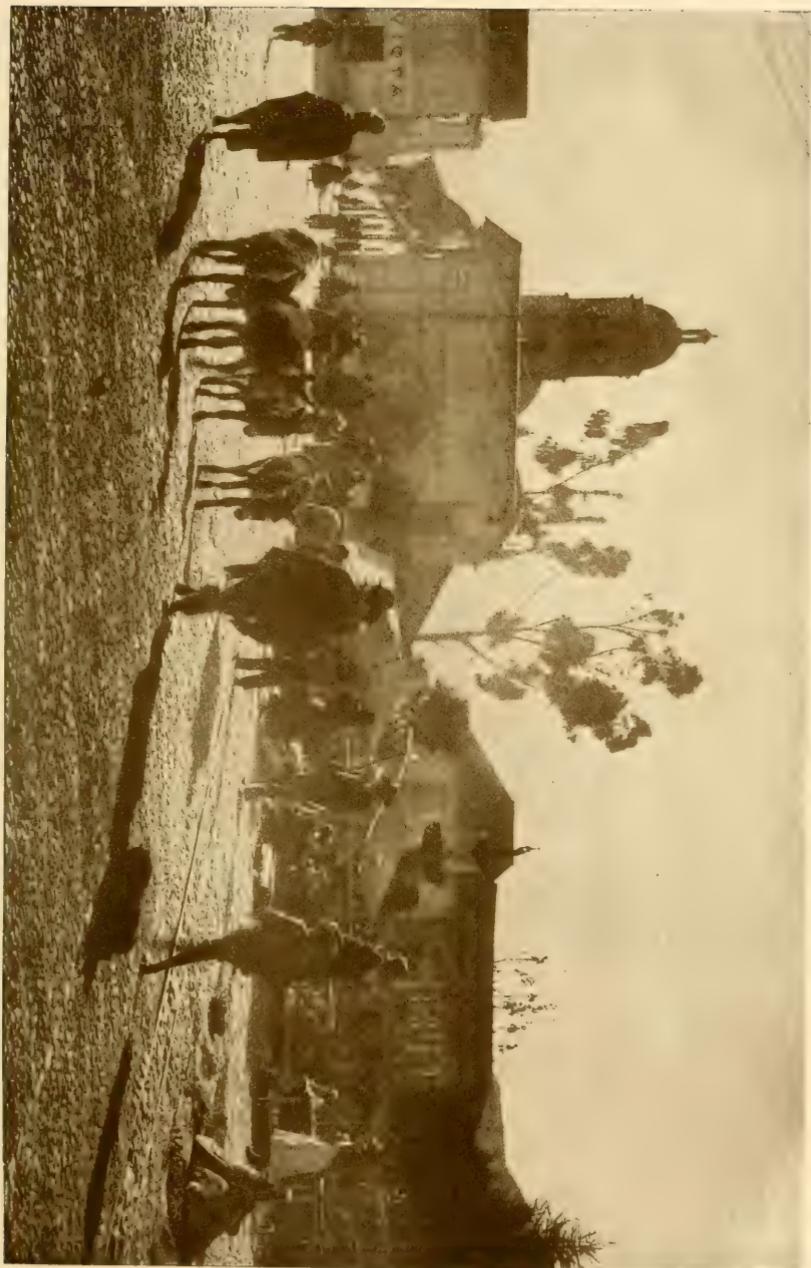
A PLAZA IN LA PAZ, SHOWING MOUNT ILLIMANI IN THE DISTANCE.

lent, if not the most turbulent, of all the Spanish possessions in the Western Hemisphere. But this unrest assumed a different phase in upper Peru from what it was elsewhere. It was not, as in Chile for instance, a conflict between the whites and the Indians. The

Aymaras were, as compared with the Araucanians of Chile or the savage Caribs of Venezuela, a most unwarlike race. With the exception of TUPAC AMARU's ill-fated attempt to revive the Inca empire, into which attempt the Indians of upper Peru, under TUPAC CATARI, were drawn, and in which Sorata was destroyed and La Paz menaced for three months, the native inhabitants were more or less docile. The turbulence of the colony was due to internal strife among the whites. For two centuries following the conquest the principal and almost the only interest, if one except the work of the missionaries, that the white man had in upper Peru was in exploiting the rich mines of gold and silver. Mining was the sole industry. Everything, including the existence of the colony, depended thereon. All the laws and regulations for the conduct of this industry were made by the council of the Indies sitting in far-off Cadiz. The viceroy in Lima or Buenos Aires or the *oidores* of the audiencia of Charcas seemed almost as far away. Only the intendente at La Paz or Potosi was there to represent the King and the Government. All of these, from viceroy to intendente, were bent on squeezing the last penny out of the mine operators and the people. There was no relief, there was no appeal. The heavy-handed Government worked its own will with the single purpose of filling the treasure ships for Panama and incidentally, and often primarily, the pockets of viceroys, *oidores*, and *intendentes* in Lima, Buenos Aires, Charcas, or La Paz. Oppression and injustice, which were not possible in these places because of the closer connection with the King or the council in Cadiz, were of everyday occurrence in La Paz. Added to this unhappy state of affairs, due to direct misgovernment, there was a race conflict among the whites. A considerable number of the first conquerors were Basques, in Spanish "Vascongados." Gradually the Vascongados and their adherents obtained possession of the principal posts of government, and the name "Vascongados" became that of a political party rather than a race designation. Opposed to the Vicuñas were the "Vicuñas," so called from the cap of vicuña wool which they wore as a party badge. The Vicuñas were originally from Andalusia, Castilla, and other parts of Spain, but later came to include all opposed to the governing party, and was composed principally of the creoles or native born, while the Vascongados continued to be almost entirely Spanish born. The badge of the Vicuñas became the badge of an incipient Americanism opposed to foreign dominion. La Paz and Potosi were the centers of the Vicuña opposition, so that it is to these cities, and to La Paz in particular, that Bolivia, and through Bolivia, America owes the first organized opposition to European fetters, and Spanish America owes what was in truth the beginning of the revolution which under BOLIVAR, SAN MARTIN, and SUCRE swept the Spanish flag from the mainland of America.

Courtesy of the National Geographic Magazine.

PLAZA SAN SEBASTIAN, LA PAZ.



One hundred and fifty years before THOMAS JEFFERSON's immortal indictment of British misrule and defiance of British authority, the Declaration of Independence, was flung by the Continental Congress of the American Colonies in the face of GEORGE III and his Parliament, ALONZO IBAÑEZ, the first martyr to American independence, a leader of the Vicuñas, perished in an attempt to overthrow Spanish authority at Potosi and La Paz. Some years later ANTONIO GALLADO, leader of the Cholos, or half-breeds, of La Paz, killed or banished the Spanish officials and proclaimed independence. GALLADO was killed in the battle of Puno. So conditions continued down into the nineteenth century and the final overthrow of Spanish authority in the territory now known as Bolivia. The country was never pacified for any length of time. There were constant uprisings against the Government, not only in La Paz, but in Potosi, Cochabamba, Osuro, and other places. The great Indian uprising under TUPAC AMARU, which had its origin across the border at Cuzco in Peru and which spread into Bolivia, joining forces with the uprising in the latter country, which began in 1780 under the three CATARI brothers, differed from most of the other revolutions in being a war of Indian against white man rather than a war of colonist against mother country.

The real beginning of the final revolution against Spain was in 1809, and was precipitated by the action of the Junta Tuitiva, the Protection League, of La Paz. This patriotic organization, or perhaps it should be more properly called conspiracy, under the lead of PEDRO DOMINGO MURILLO, the father of Bolivian independence, on July 16, 1809, seized the cuartel, imprisoned the Spanish governor, issued a declaration of independence, and proceeded to organize a government which should be free and independent of the mother country. Although at this time Alto Peru was joined to the vice-royalty of Buenos Aires, yet its inaccessibility from Buenos Aires made it next to impossible for the Spanish Government to deal with the revolution from this point, and Buenos Aires itself was honeycombed with insurrectionary principles.

Communication with Lima was less difficult, and, besides, Peru was the real center and stronghold of Spanish power during most of the revolutionary period. An army was sent out by the viceroy of Peru and the government established by the Junta Tuitiva overthrown and MURILLO himself executed in January, 1810. But this was only the first blow. In four months thereafter an army was assembled in the south under BALCACE, DIAZ VELEZ, and CASTELLO, and advancing upon Suipacha defeated the viceroy's troops under NIETO, CORDOVA, and BASAGOITIA. There was a rising in Cochabamba and the patriots were successful.

The war for independence continued for fifteen years after the death of MURILLO with varying fortunes to the two sides. At one time every spark of resistance to Spain seemed crushed out, but again the patriots were successful. The war on each side was to the knife, with little or no mercy shown the defeated.

Meanwhile the success of the revolutionists in the Argentine Republic, Chile, and Peru, under SAN MARTIN, and in the north under BOLIVAR, was bringing affairs to a close in all of South America. The

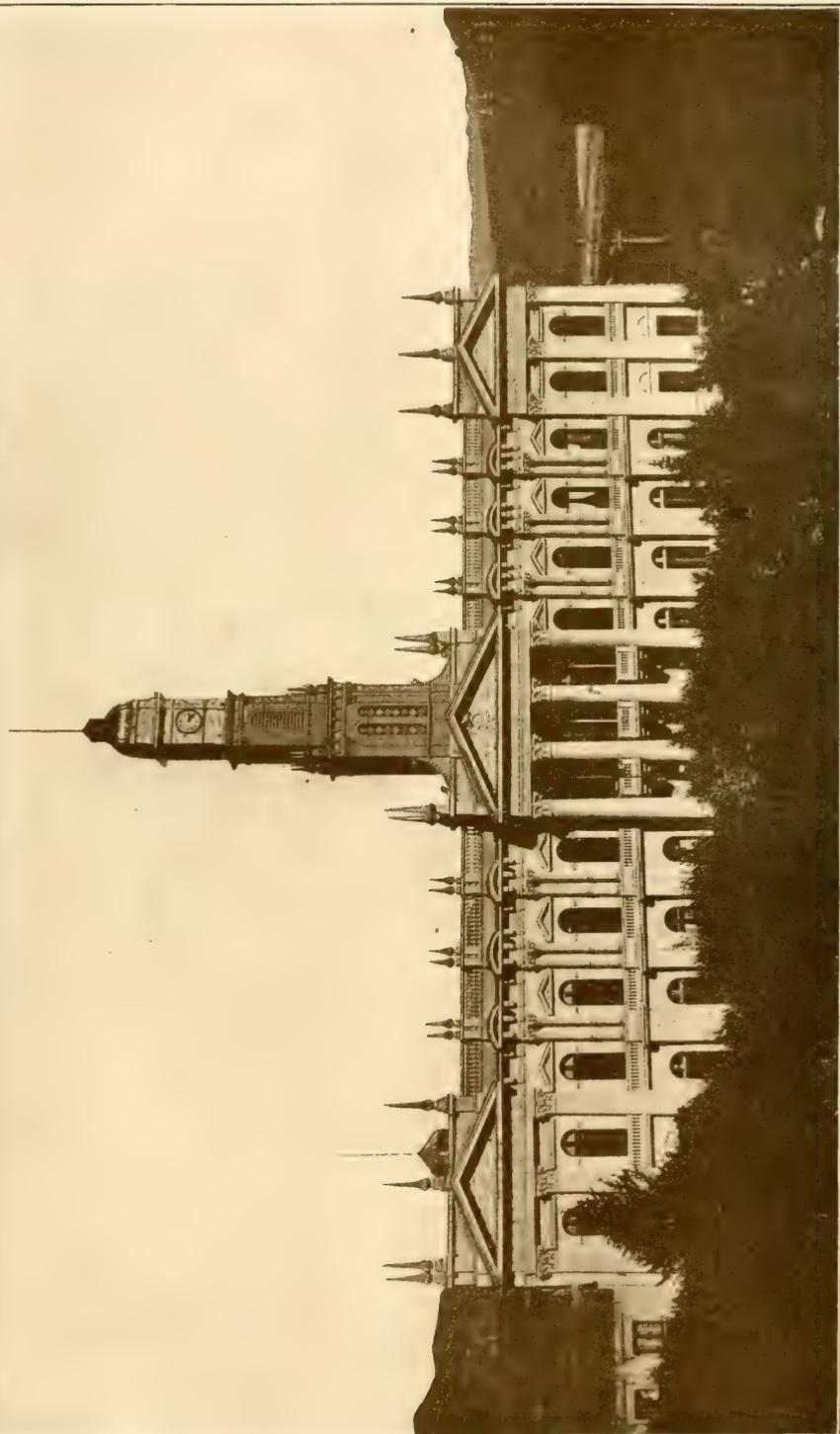


(Courtesy of the National Geographic Magazine.)

COURTYARD OF A HOTEL IN LA PAZ, FORMERLY A COLONIAL MANSION.

La Paz, like most large South American cities at the present time, is well equipped with electric light and telephone systems, and the larger hotels have been supplied with the modern improvements found in northern cities. Many of them have been transformed from the old mansions of their early Spanish owners.

Spaniards were driven out of Lima by SAN MARTIN, and BOLIVAR had joined him in that city. Upon the retirement of SAN MARTIN to Chile the war in Alto Peru was prosecuted under the orders of BOLIVAR and his general, ANTONIO JOSÉ DE SUCRE. The final battle of the war was fought at Ayacucho on December 9, 1824, between the forces of SUCRE and the viceroy, LA SERNA. The Spaniards were entirely overthrown. On January 25, 1825, General JOSÉ MANUEL LANZA entered La Paz, from which the Spanish authorities



THE CAPITOL AT LA PAZ, BOLIVIA.

The new Executive Palace, while but two stories in height, is much more spacious than the one it replaces. It faces the principal plaza of the city, and is one of the handsomest modern buildings in La Paz.

had fled, and this date marks the disappearance of the last show of Spanish authority in South America. The great war of independence began in La Paz and it ended in La Paz. The territory of the audiencia of Charcas, or Alto Peru, as it was usually called, became the Republic of Bolivia, so named in honor of the great liberator, Gen. SIMON BOLIVAR. Charcas, or, as it had come to be called, Chuquisaca, the capital, became Sucre, in honor of BOLIVAR's chief lieutenant-general, ANTONIO JOSÉ DE SUCRE, and the city of Nuestra Señora de la Paz became the city of La Paz de Ayachuco.

La Paz, Mexico, Bogota, Quito, and Caracas are the five highest capitals in the world, but La Paz exceeds its nearest rival, Quito, by a half mile in elevation above sea level. Its elevation is 12,250 feet. In temperature it varies but little during the year, but the diurnal variations are sometimes very great—as much as 50° in twenty-four hours—when the thermometer may drop from 80° or 82° F. at noon to below freezing at night.

The great Bolivian plateau, the most remarkable high plateau in the world, if one excepts Thibet, and more remarkable in many ways than this comparatively unknown country, is from 11,000 to 13,000 feet high, lies between two ranges of the Andes running from northwest to southeast, and is about 500 miles long and 80 miles wide. Its area is approximately about the same as the State of Ohio. It is comparatively level and semiarid. Where irrigation can be effected the land is remarkably productive, but the range of crops is limited to such as will grow at this immense altitude.

La Paz can be reached by railroad from the south either through Chile or the Argentine Republic or from the northwest through Peru. The Antofagasta Railway from that port in Chile connects directly through Oruro with the railway to La Paz; or from Mollendo, on the coast of Peru, the railroad leads directly to Puno on Lake Titicaca, whence by steamer across the lake connection is made with Guaqui and from there by railroad to La Paz. There is a break in the connection with the Argentine railway system which it is expected will be closed in a short while. The railroad from Arica is under construction, and when completed will give a third Pacific connection.

In coming to La Paz a stranger is always surprised at its location. Considering its elevation of about 12,000 feet, he naturally expects to find a city on a hill. In fact, he finds La Paz at the bottom of a deep canyon, and first sees the city on looking down into what appears an abyss shut in on all sides. In reality it is the canyon of the Chuquiapu River. The canyon is 1,500 feet deep, and down this, by numerous curves and twists, the railway winds its way from the height of La Paz into the city. Seen from the height and from the railway the city is one of the most picturesque in South America, in many ways the most picturesque. There is the same variety of color

in tiled roofs and walls as in Caracas or Quito, but the colors are more brilliant, sharper, and less oriental. And so it is with the costumes of the people. The upper classes are of course cosmopolitan in dress, but with the work people and the Indians bright colors predominate. The Indian man or woman is often a most gorgeous sight in bright red, green, and yellow.

The memory of **PEDRO DOMINGO MURILLO**, the martyr to independence, is kept alive by the Plaza Murillo, a beautiful park, which is the principal breathing space for the city's population of about 75,000. The Alameda, over a half mile in length, is a broad driveway of five parallel avenues divided by rows of trees, the whole presenting the appearance of a park. At night the Alameda is lighted by electricity and presents a most brilliant appearance. A prolongation of the Alameda, the Avenida Doce de Diciembre, leads to Obrajes, about 3 miles away from the city.

The old palace of the President, which, by the way, is less than 30 years old, is a very fine building of cut stone, but on account of its small size is to be abandoned for the new palace, which will also house the National Congress. This building, when completed, will be an ornament to the capital.

The great cathedral of La Paz is the most notable building of the city. It is not yet finished, although it has been under almost constant construction for over seventy years. When completed it will be the largest and handsomest church constructed in Latin America since the war of independence. It will cover a surface area of more than 43,000 square feet and will seat 12,000 people. The style is Greco-Roman, with a central cupola about 150 feet in height, with two towers rising 50 feet higher. There are five aisles and the main altar will be of marble. Of the older churches, that of San Francisco is the most important. The front is of beautifully wrought stone, and the principal altar is of cedar carved in a most artistic manner. The old cathedral is the church of Santo Domingo. Besides these, there are about a dozen other ecclesiastical edifices which in architecture will compare favorably with the churches of the larger cities of South America.

Other buildings of importance in La Paz are the penitentiary of San Pedro, the general telegraph office, the national custom-house, the military college on the Alameda, the war department, the school of medicine, the university, the museum and public library, and the municipal theater.

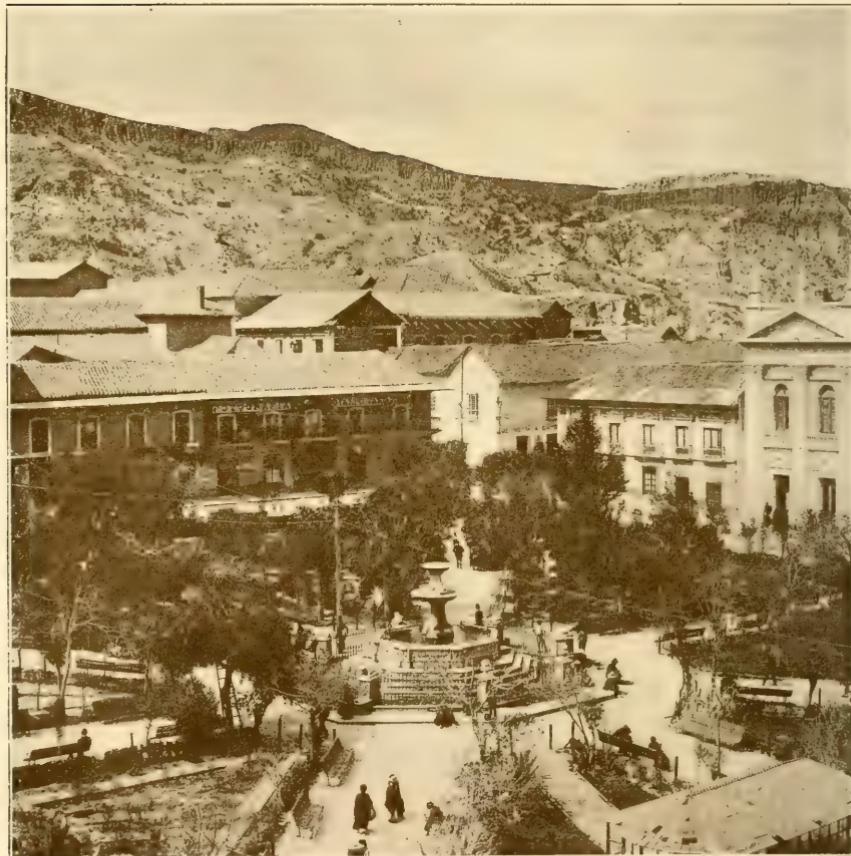
Besides the Murillo plaza and the Alameda, there are ten other plazas in the city, the most important of which is that of Alonzo de Mendoza, in the northern part of the city. La Paz is lighted by electricity, has a complete telephone system, and the hotels are among the best in South America.

OPENING OF CONGRESS. LA PAZ, BOLIVIA.

The National Congress holds an annual session of sixty days, usually commencing August 6. The legislative branch of the Government consists of a Senate, composed of two members from each of the eight Departments of the Republic and elected for a term of six years, one-third of whom are renewed every two years; and a House of Representatives with seventy-two members, elected for four years, one-half of whom are renewed every second year. The members of both Houses are elected by popular vote.

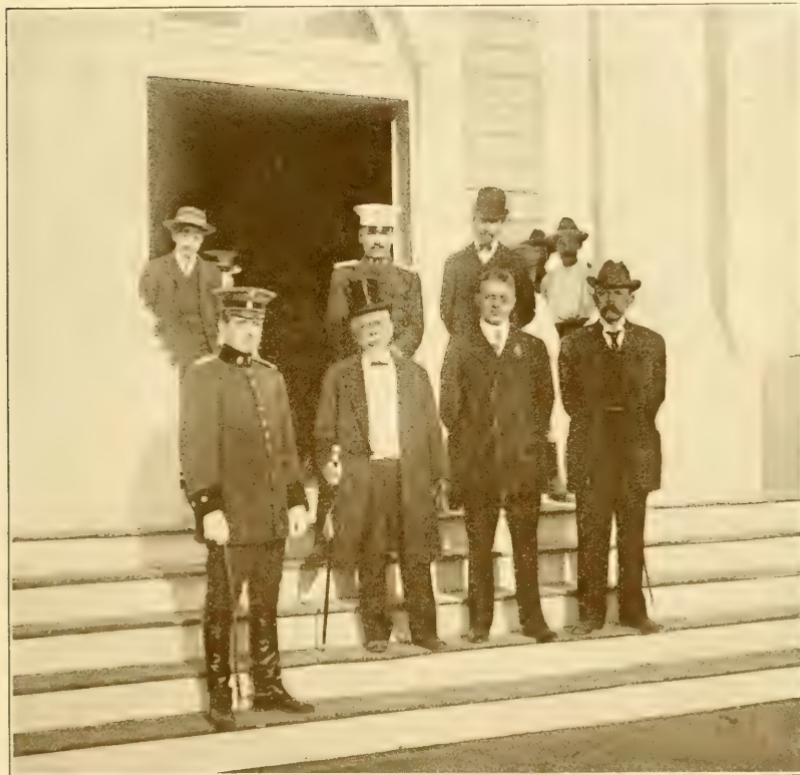


The city is governed by a municipal council of twelve members, with a president, vice-president, and secretary elected from among the members. Other municipal officials are appointed by the council. The council has entire charge of the city's finances and presents an annual budget. It appoints, in addition to the general city officers, the barrio or ward mayors and officers. It imposes taxes and directs the manner of their collection, has charge of the primary school system, and issues all licenses. All public improvements of a municipal character are under its control.



UNITED STATES AWARDS AT THE QUITO EXPOSI- TION

THE active participation of the United States Government in the exposition held at Quito, Ecuador, during the summer months of 1909, demonstrated in a high degree the friendly relations between the Governments of the two Republics. The exhibit of the United States not only commended itself to the



GROUP TAKEN IN FRONT OF THE BUILDING OF THE UNITED STATES OF AMERICA
AT THE NATIONAL ECUADORAN EXPOSITION.

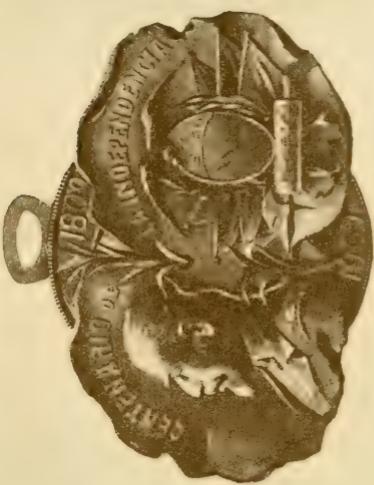
From left to right: Colonel Olmedo Alfaro; General Eloy Alfaro, President of the Republic; Hon. Ernest H. Wands, Commissioner of the United States; Señor Don Luis Felipe Carbo, Minister of Ecuador to the United States.

visiting public, but also received numerous awards from the committees who adjudged the merits of the various international displays.



"AGRICULTURE."

One of the many beautiful statues at the National Ecuadorian Exposition in Quito, located in the court between the Chilean pavilion and the French section of the main building.



MEDALS GIVEN AT THE NATIONAL EXPOSITION IN QUITO.

Reverse of gold medal, first premium.

Reverse of silver medal, second premium.

Reverse of medal commemorative of the centenary of the independence of Ecuador.

Reverse of bronze medal, third premium.

Many officials of the United States Government were also made the recipients of honors in consequence of their hearty cooperation with the efforts of Ecuador to render the exposition one of noteworthy excellence.

To the President of the United States, Mr. WILLIAM H. TAFT, a special award of the first class was made, the following officials also receiving awards of the first class: Secretary of State PHILANDER C. KNOX, ex-President THEODORE ROOSEVELT, ex-Secretary of State ELIHU ROOT.

Awards of the first class were made to the following participating departments of the United States Government:



JAPANESE KIOSK AT THE NATIONAL EXPOSITION IN QUITO.

Erected by the business men of Ecuador interested in the importation of oriental goods.

The Department of State for the preparation and presentation of foreign articles, for the documents shown connected with the history of the United States, for the exhibition of furniture, and for the biographical exhibit.

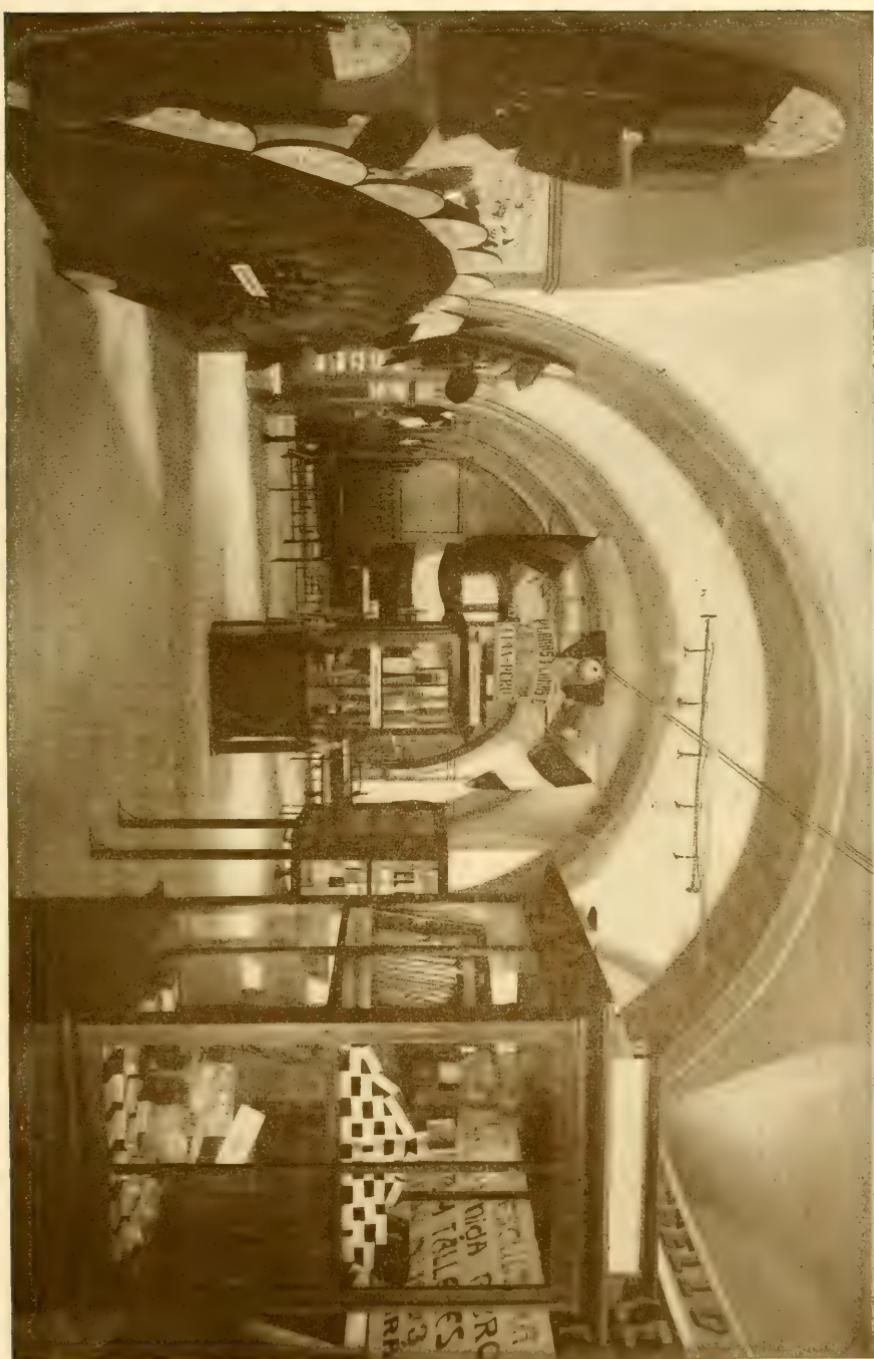
The Departments of War and Navy for exhibitions of equipment and construction.

The Department of Justice for exhibits connected with the allied work.

The Treasury Department for monetary exhibits, for life-saving apparatus, and for statistics concerning tuberculosis.

The Department of Commerce and Labor for fishery and hydrographic exhibits.

INTERIOR VIEW OF THE PERUVIAN SECTION AT THE NATIONAL ECUADORAN EXPOSITION.



The Agricultural Department for cereal and cotton exhibits and a demonstration as to road construction.

The Department of the Interior for exhibit of educational methods among the Indians, for geologic and topographic charts, for an exhibit showing the development of arid districts, and for a combustible mineral display.

The Post-Office Department for postal service and stamp collection displays.

The International Bureau of the American Republics for historical documents covering the life of Columbus, for antique maps of the Western Hemisphere, and to the Director of the Bureau, Mr. JOHN BARRETT, for his effective aid in the preliminary work of the exposition.



SEÑOR DON RICARDO COLMENARES.
Commissioner of Peru to the National Ecuadorian Exposition.

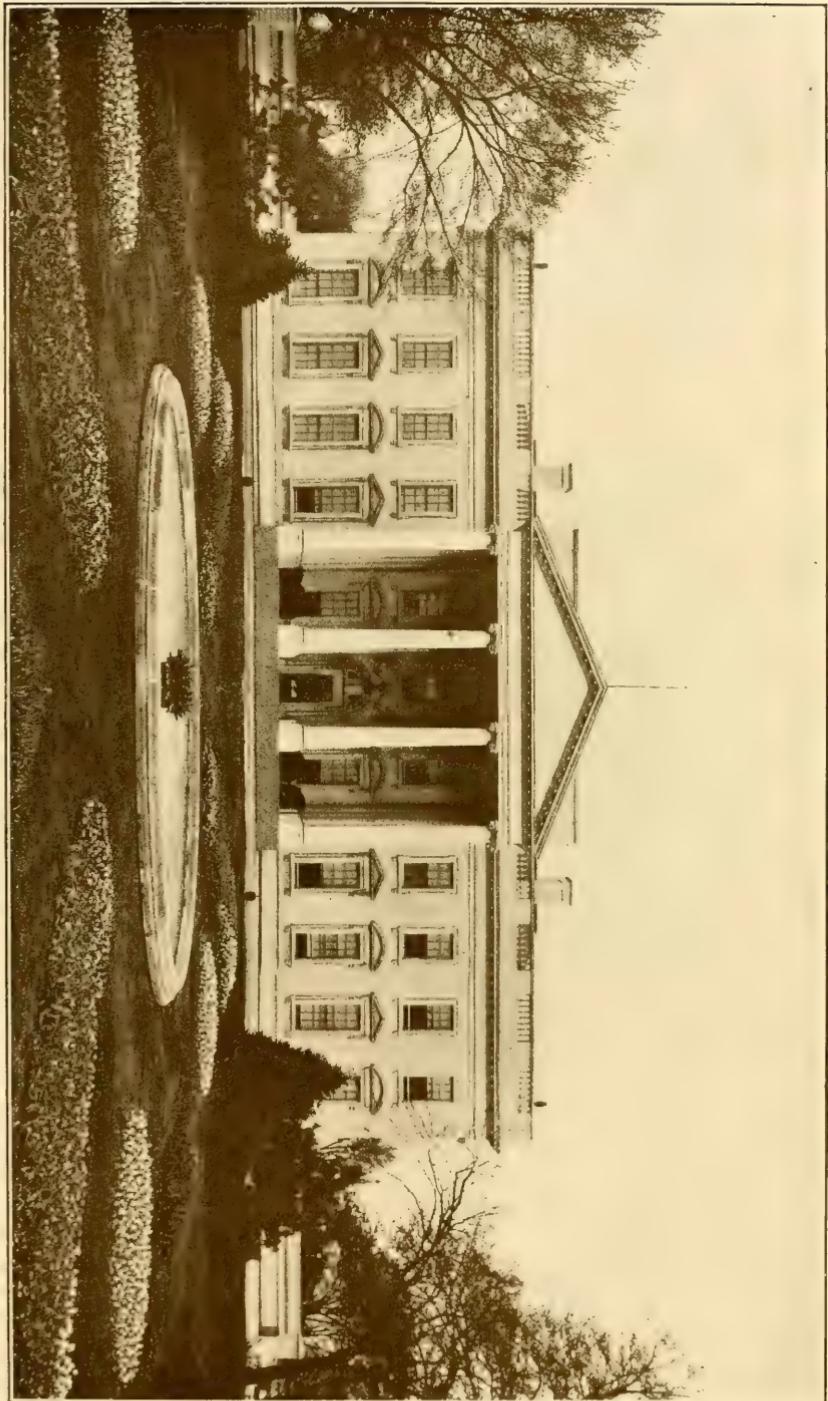
Diplomas of honor were conferred for services in connection with the exposition upon Mr. HUNTINGTON WILSON, First Assistant Secretary of State of the United States; Mr. WILLIAM PHILLIPS, Third Assistant Secretary of State; Mr. ERNEST HENRY WANDS, Commissioner for the United States to the exposition; Mr. WILBUR CARR, Chief of Bureau in the Department of State; Mr. J. C. SCHOFIELD, in charge of the War Department exhibit; Mr. F. S. CURTIS, in charge

of the Navy Department exhibit; Mr. O. J. FIELD, in charge of the Department of Justice exhibit; Hon. WILLIAMS C. FOX, Minister from the United States, for valuable cooperation in the work; Mr. W. W. LUDLOW, in charge of the Treasury Department exhibit; Mr. F. H. BOWEN, in charge of the exhibit of the Department of Commerce and Labor; Col. S. R. BURCH, in charge of the exhibit of the Department of Agriculture; Mr. R. P. COVERT, in charge of Post-Office exhibit; Mr. J. C. BOYKIN, in charge of the exhibit of the Interior Department.

To Mr. R. B. DOLE, in charge of the installation of the various exhibits from the United States, a medal of honor was awarded.

THE WHITE HOUSE, WASHINGTON, DISTRICT OF COLUMBIA.

President Washington laid the corner stone of the building in 1792. It was burned by the English in 1814 and reconstructed in 1818. Since that date it has been altered a number of times. The flag is not raised over the building when the President is absent from the city.





MESSAGE OF PRESIDENT TAFT

THE first annual message addressed by President WILLIAM H. TAFT to the Congress of the United States was delivered on December 7, 1909, at the second session of the Sixty-first Congress.

For the reason that there is no provision, either by statute or custom, for a formal report by the Secretary of State to the President or to Congress, and a presidential message is the only means by which the condition of the foreign relations of the country is brought to the attention of Congress and the public, the document is invaluable to students of international affairs.

The relations of the United States with all foreign governments are stated to have continued upon the normal basis of amity and good understanding, and are very generally satisfactory.

As regards Latin-American relations with the United States extended comment is made in the following terms:

One of the happiest events in recent Pan-American diplomacy was the pacific, independent settlement by the Governments of Bolivia and Peru of a boundary difference between them, which for some weeks threatened to cause war and even to entrap embitterments affecting other Republics less directly concerned. From various quarters, directly or indirectly concerned, the intermediation of the United States was sought to assist in a solution of the controversy. Desiring at all times to abstain from any undue mingling in the affairs of sister Republics, and having faith in the ability of the Governments of Peru and Bolivia themselves to settle their difference in a manner satisfactory to themselves which,

viewed with magnanimity, would assuage all embitterment, this Government steadily abstained from being drawn into the controversy and was much gratified to find its confidence justified by events.

On July 9 next there will open at Buenos Aires the Fourth Pan-American conference. This conference will have a special meaning to the hearts of all Americans, because around its date are clustered the anniversaries of the independence of so many of the American Republics. It is not necessary for me to remind the Congress of the political, social, and commercial importance of these gatherings. You are asked to make liberal appropriation for our participation. If this be granted, it is my purpose to appoint a distinguished and representative delegation, qualified fittingly to represent this country and to deal with the problems of intercontinental interest which will there be discussed.

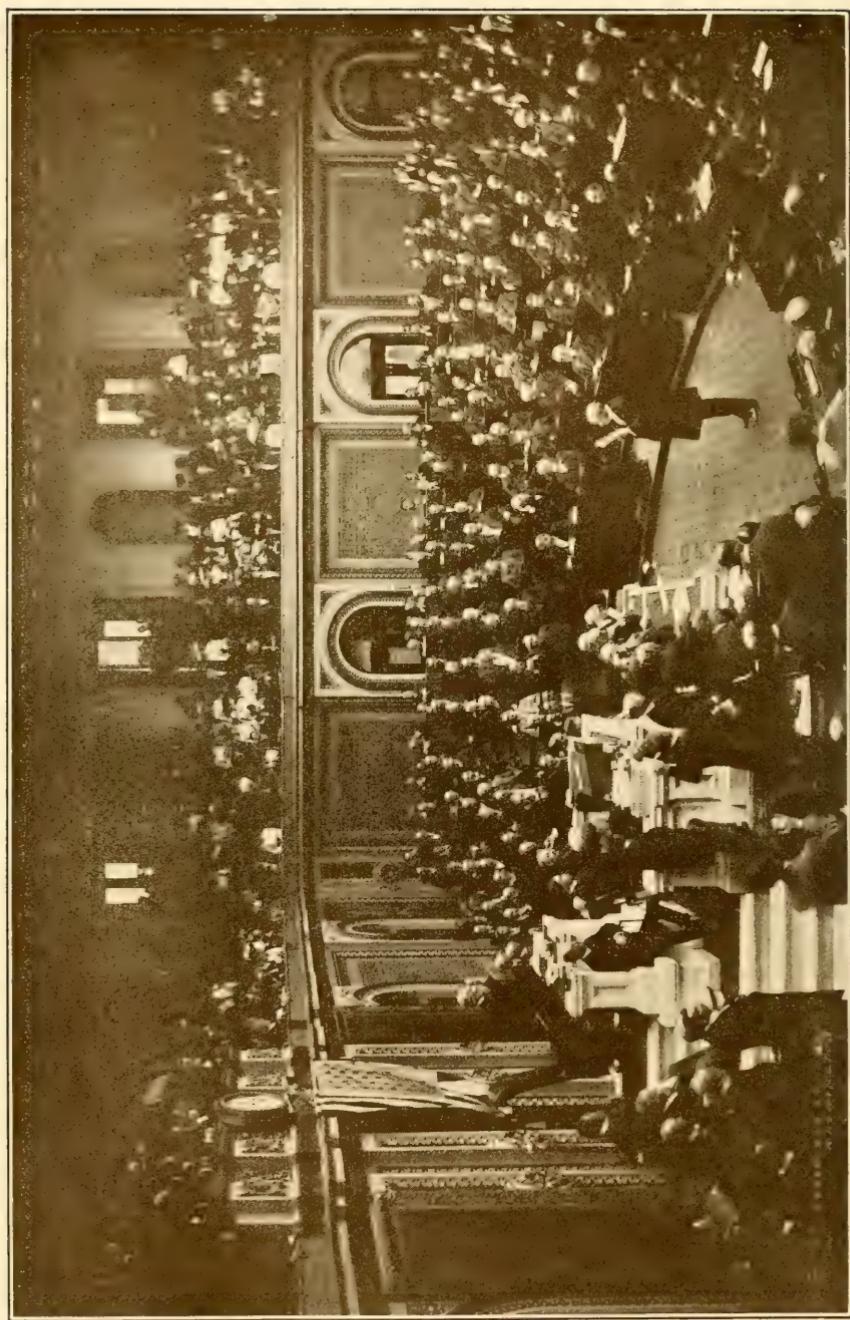
The Argentine Republic will also hold, from May to November, 1910, at Buenos Aires, a great international agricultural exhibition, in which the United States has been invited to participate. Considering the rapid growth of the trade of the United States with the Argentine Republic and the cordial relations existing between the two nations, together with the fact that it provides an opportunity to show deference to a sister Republic on the occasion of the celebration of its national independence, the proper departments of this Government are taking steps to apprise the interests concerned of the opportunity afforded by this exhibition, in which appropriate participation by this country is so desirable. The designation of an official representative is also receiving consideration.

* * * * *

The Pan-American policy of this Government has long been fixed in its principles, and remains unchanged. With the changed circumstances of the United States and of the Republics to the south of us, most of which have great natural resources, stable government, and progressive ideals, the apprehension which gave rise to the Monroe doctrine may be said to have nearly disappeared, and neither the doctrine as it exists, nor any other doctrine of American policy, should be permitted to operate for the perpetuation of irresponsible government, the escape of just obligations, or the insidious allegation of dominating ambitions on the part of the United States.

Beside the fundamental doctrines of our Pan-American policy there have grown up a realization of political interests, community of institutions, and





THE HOUSE OF REPRESENTATIVES OF THE UNITED STATES OF AMERICA IN SESSION.
The Speaker, Hon. Joseph G. Cannon, taking the oath of office before the Secretary who is standing on the floor of the Chamber.

ideals, and a flourishing commerce. All these bonds will be greatly strengthened as time goes on and increased facilities, such as the great bank soon to be established in Latin America, supply the means for building up the colossal intercontinental commerce of the future.

My meeting with President DIAZ and the greeting exchanged on both American and Mexican soil served, I hope, to signalize the close and cordial relations which so well bind together this Republic and the great Republic immediately to the south, between which there is so vast a network of material interests.

I am happy to say that all but one of the cases which for so long vexed our relations with Venezuela have been settled within the past few months, and that, under the enlightened régime now directing the Government of Venezuela, provision has been made for arbitration of the remaining case before The Hague tribunal.

On July 30, 1909, the Government of Panama agreed, after considerable negotiation, to indemnify the relatives of the American officers and sailors who were brutally treated, one of them having, indeed, been killed by the Panaman police this year.

The sincere desire of the Government of Panama to do away with a situation where such an accident could occur is manifest in the recent request, in compliance with which this Government has lent the services of an officer of the army to be employed by the Government of Panama as instructor of police.

The sanitary improvements and public works undertaken in Cuba prior to the present administration of that Government, in the success of which the United States is interested under the treaty, are reported to be making good progress, and since the Congress provided for the continuance of the reciprocal commercial arrangement between Cuba and the United States, assurance has been received that no negotiations injuriously affecting the situation will be undertaken without consultation.

The collection of the customs of the Dominican Republic through the general receiver of customs appointed by the President of the United States, in accordance with the convention of February 8, 1907, has proceeded in an uneventful and satisfactory manner. The customs receipts have decreased, owing to disturbed political and economic conditions and to a very natural curtailment of imports, in view of the anticipated revision of the Dominican tariff schedule. The payments to the fiscal-agency fund for the service of the bonded debt of the Republic, as provided by the convention, have been regularly and promptly made, and satisfactory progress has been made in carrying out the provisions of the convention looking toward the completion of the adjustment of the debt and the acquirement by the Dominican Government of certain concessions and monopolies which have been a burden to the commerce of the country. In short, the receivership has demonstrated its ability, even under unfavorable economic and political conditions, to do the work for which it was intended.

This Government was obliged to intervene diplomatically to bring about arbitration or settlement of the claim of the Emery Company against Nicaragua, which it had long before been agreed should be arbitrated. A settlement of this troublesome case was reached by the signature of a protocol on September 18, 1909.

Many years ago diplomatic intervention became necessary to the protection of the interests in the American claim of Alsop & Co. against the Government of Chile. The Government of Chile had frequently admitted obligation in the case and had promised this Government to settle it. There had been two abortive attempts to do so through arbitral commissions, which failed through lack of jurisdiction. Now, happily, as the result of the recent diplomatic negotiations the Governments of the United States and of Chile, actuated by the

sincere desire to free from any strain those cordial and friendly relations upon which both set such store, have agreed by a protocol to submit the controversy to definite settlement by His Britannic Majesty, Edward VII.

Since the Washington conventions of 1907 were communicated to the Government of the United States as a consulting and advising party, this Government has been almost continuously called upon by one or another, and, in turn, by all of the five Central American Republics, to exert itself for the maintenance of the conventions.

* * * * *

I need not rehearse here the patient efforts of this Government to promote peace and welfare among these Republics, efforts which are fully appreciated by the majority of them who are loyal to their true interests.

* * * * *

At the date when this message is printed this Government has terminated diplomatic relations with the Zelaya Government, for reasons made public in a communication to the former Nicaraguan chargé d'affaires, and is intending to take such future steps as may be found most consistent with its dignity, its duty to American interests, and its moral obligations to Central America and to civilization. It may later be necessary for me to bring this subject to the attention of the Congress in a special message.

The satisfactory solution arrived at for financing the building of the Panama Canal is outlined in the following terms:

The policy of paying for the construction of the Panama Canal, not out of current revenue, but by bond issues, was adopted in the Spooner Act of 1902, and there seems to be no good reason for departing from the principle by which a part at least of the burden of the cost of the canal shall fall upon our posterity who are to enjoy it; and there is all the more reason for this view because the actual cost to date of the canal, which is now half done and which will be completed January 1, 1915, shows that the cost of engineering and construction will be \$297,766,000, instead of \$139,705,200, as originally estimated. In addition to engineering and construction, the other expenses, including sanitation and government, and the amount paid for the properties, the franchise, and the privilege of building the canal, increase the cost by \$75,435,000, to a total of \$375,201,000. The increase in the cost of engineering and construction is due to a substantial enlargement of the plan of construction by widening the canal 100 feet in the Culebra cut, and by increasing the dimensions of the locks, to the underestimate of the quantity of the work to be done under the original plan, and to an underestimate of the cost of labor and materials, both of which have greatly enhanced in price since the original estimate was made.

Urging effective legislation in the matter of maritime communication whereby commercial relations between the United States and Latin America will be greatly stimulated, the message states:

Following the course of my distinguished predecessor, I earnestly recommend to Congress the consideration and passage of a ship subsidy bill, looking to the establishment of lines between our Atlantic seaboard and the eastern coast of South America, as well as lines from the west coast of the United States to South America, China, Japan, and the Philippines.

The efforts being made to cover increasing trade demands on the part of Latin America and elsewhere are thus noted:

I earnestly recommend to the favorable action of the Congress the estimates submitted by the Department of State, and most especially the legislation sug-

gested by the Secretary of State's letter of this date, whereby it will be possible to develop and make permanent the reorganization of the department upon modern lines in a manner to make it a thoroughly efficient instrument in the furtherance of our foreign trade and of American interests abroad. The plan to have divisions of Latin American and far Eastern affairs and to institute a certain specialization in business with Europe and the near East will at once commend itself. These politico-geographical divisions and the detail from the diplomatic or consular service to the department of a number of men, who bring to the study of complicated problems in different parts of the world practical knowledge recently gained on the spot, clearly is of the greatest advantage to the Secretary of State in foreseeing conditions likely to rise and in conducting the great variety of correspondence and negotiation. It should be remembered that such facilities exist in the foreign offices of all the leading commercial nations, and that to deny them to the Secretary of State would be to place this Government at a great disadvantage in the rivalry of commercial competition.

Prosperity, as evidenced by economic conditions prevailing throughout the country, is made the subject of the following concluding statement:

Speaking generally, the country is in a high state of prosperity. There is every reason to believe that we are on the eve of a substantial business expansion, and we have just garnered a harvest unexampled in the market value of our agricultural products. The high prices which such products bring mean great prosperity for the farming community, but on the other hand they mean a very considerable increased burden upon those classes in the community whose yearly compensation does not expand with the improvement in business and the general prosperity. Various reasons are given for the high prices. The proportionate increase in the output of gold, which to-day is the chief medium of exchange, and is in some respects a measure of value, furnishes a substantial explanation of at least part of the increase in prices. The increase in population and the more expensive mode of living of the people, which have not been accompanied by a proportionate increase in acreage production, may furnish a further reason. It is well to note that the increase in the cost of living is not confined to this country, but prevails the world over, and that those who would charge increases in prices to the existing protective tariff must meet the fact that the rise in prices has taken place almost wholly in those products of the factory and farm in respect to which there has been either no increase in the tariff or in many instances a very considerable reduction.



MEXICO'S NEW MINING CODE^a

ON the morning of November 25, 1909, President DIAZ set his signature to the new mining code of Mexico as passed by the two legislative cámaras, to become effective after the 1st day of January, 1910. The new code supersedes the code of 1892. It contains, however, comparatively little that is new. The cardinal features of the old Mexican mining law are in no wise changed. The main purpose of the new codification was to fuse into one homogeneous and coordinated whole the provisions of the old code and the related heterogeneous mass of executive decrees and departmental rulings and circulars which had accumulated during some twenty years, and which made the search and application of the Mexico mining laws a matter of no little difficulty. The general consensus of opinion in the mining and legal professions here is that the new law is a masterpiece of conservative effort and that it will stand as a monument to the wisdom and energy of the present Secretary of the Department of Fomento, Señor LICENCIADO OLEGARIO MOLINA.

The fundamental principles to-day underlying the mining laws of Mexico are borrowed from the Spanish legislation, modified in certain respects to meet the different political and economical conditions existing here. Under the Mexican law all mineral deposits are divided sharply into two classes. Those falling in the first class belong to the owner of the soil, whereas those falling in the second class lie in the grant of the nation and may be acquired only by denunciation and the issue of a federal patent. The substances belonging to the owner of the soil embrace deposits of mineral combustibles, such as coal and oil, of bituminous substances, and of surface salts; also quarries of marble, slate, building stone, etc. These do not come under the mining laws for any purpose whatsoever, except that coal mines are subject to federal police inspection. The substances which lie in the grant of the federal power are all deposits of inorganic substances found in veins or masses the formation of which is separate and distinct from that of the country rock. Such substances include the minerals, such as gold, silver, lead, copper, etc.; the precious stones; sulphur, arsenic, and tellurium, and rock salt. To these deposits must be added placers of gold and of platinum. All these fall under the provisions of the mining code

^a By Frederick F. Barker, attorney, of Mexico City.

and, until granted, are owned by the Federal Government, representing the nation, wherever they may be found, whether in private ground or in the public domain.

As a consequence of this, the mineral ownership is different from the ownership of the soil; and the freehold in the mineral deposits is for all legal purposes distinct and permanently separated from the freehold in the soil. Even when the two estates are united in the same person, no legal fusion takes place; each estate is held under and by virtue of a distinct title.

Mines are acquired from the Government under an administrative proceeding had before a local representative of the Department of Fomento, called a mining agent. The proceeding is termed a denunciation. Any person, whether foreign or native, except as indicated below, may denounce a mining property and secure a patent to the same. The title is issued to the first applicant. The Mexican law gives no preference to the discoverer of the mine, nor to the first occupant, nor to the owner of the soil. Priority of application, with issue of title and due registration thereof, alone gives priority of right.

The unit of grant is what is called a "pertenencia," being a solid of unlimited depth, the upper or projected extremity of which is a square measuring 100 meters on each side. The law sets no limit to the size of the mineral grant, and the applicant's enthusiasm will be restrained only by the fact that on every "pertenencia" he must pay an initial tax of 5 pesos (a peso being the equivalent of 50 cents in United States currency), and an annual tax thereafter of 6 pesos a "pertenencia" on the first 25 "pertenencias" and 3 pesos a "pertenencia" on the excess, provided they are contiguous.

Although the owner of a mining grant does not own or control the surface ground, the law, regarding the mining industry as a public utility, compels the surface owner to permit whatever easements or expropriation of ground may be found necessary for the conduct of the mining operations. The law also grants the miner the use and enjoyment of the waters discovered in the mine.

It will be of especial interest to the American reader that the Mexican law knows nothing of the "apex rule." A miner may not pass the vertical planes of his grant; his mining operations must be confined strictly within his boundary lines drawn downward perpendicularly.

Once the miner has denounced, secured title to, and recorded his mine, all of which takes only a few months, he becomes the real owner thereof and may commence his mining operations. His property is subject to forfeiture only for nonpayment of the annual mining tax referred to above. No yearly assessment or presentation work is required of him. Subject to the police regulations govern-

ing mines, a miner may work his mineral deposits as he sees fit or may defer work indefinitely. Punctual payment of the mining tax is his sole condition of tenure.

These, in a few words, have been the basic principles of the Mexican mining laws for many years. The new code does not modify them in any way, but removes some of the old restrictions which hampered their application. In the first place, the new code completely federalizes the law applicable to mining property. The mining laws have always been federal in origin and sanction, but where no provision of the mining law was found to cover a given point, the local law was applied. Under the new code, in such cases the provisions of the civil code of the Federal District become applicable. Furthermore, the federal courts are given a wider jurisdiction than formerly over mining cases; and certain criminal offenses committed against mining enterprises, such as the robbery of minerals, are made of federal sanction.

To the commercial world, perhaps the most important innovation contained in the new mining code is that to be found in the provisions relative to mine options. Under the new law a mine option covering a period of two years may be recorded, and the holder of the option thereby acquires a property right in the mine. In other words, his right to exercise the option under the terms of the agreement will not be affected by any attempt on the part of the owner of the mine to sell to some other party. Up to the present time it has been well-nigh impossible to secure to the holder of an option full legal protection.

The new code has diminished somewhat the prospectors' rights and privileges as accorded under the old law. It has been found that the too liberal provisions of the former code had led to abuse. Under the law as it now stands, any person may secure a permit to explore either in public or in private lands, but the area of exploration is limited to the area of a circle the diameter of which does not exceed 1,000 meters. The term of exploration permitted is limited to sixty days, and is not renewable except after the lapse of six months. The holder of an exploration permit has a preferential right to denounce mines found in the exploration zone, but only during the life of the permit of course. No exploration permits are procurable in ground where mining operations have already been conducted, nor within 200 meters of a mining property, nor in inhabited districts.

A provision of the new mining code which will appeal to all miners is to the effect that no title or patent will be issued until the proper boundary monuments have been set up. Present holders of mining properties lacking these monuments are allowed one year within which to construct them.

Under the old mining law and related jurisprudence certain forms of mining partnership had come to be regarded as unlawful. The new code sweeps away all such restrictions and prohibitions and makes the federal commercial code applicable in such matters. The commercial code is very liberal in respect of partnership and corporate associations.

The scope of this article prohibits a detailed statement of the various reforms introduced by the new code. It may be added, however, that the system of registration of mining titles has been perfected; that the administrative powers of the Department of Fomento have been somewhat increased, especially in the matter of the creation of provisional easements and the provisional expropriation of ground for mining uses, as also in the inspection of mines with a view to enforcing the mining law and its regulations and to the securing of statistical data; and, finally, that the new law permits the expropriation of ground for the construction of metallurgical works and railroads to be operated in connection with the mining property.

A word in conclusion in regard to the status of foreign miners in the Republic of Mexico. Except in a zone of 80 kilometers along the border, the mining laws of Mexico do not discriminate against the foreigner. A foreign company, partnership, or individual may conduct explorations, denounce mines, and obtain mineral grants, under the same terms and conditions as a Mexican citizen. To enjoy these privileges, not even residence in the Republic is necessary, since both the denouncement may be made and the title secured through a representative. Within the aforesaid zone of approximately 50 miles, an individual may indeed denounce mines, but in order to obtain a title under which to work them or to acquire permanent property rights in mines so located, or mortgages thereon, he must first secure a permit from the President of the Republic. In the case of foreign companies, these may neither denounce nor permanently acquire by any means whatever mining lands or mortgages thereon within the zone indicated. Where such property is acquired under a judgment for debt, or upon succession at death, a year is allowed for the disposal of the mines. Under the Mexican laws, however, a Mexican corporation may consist partly or entirely of nonresident foreigners. There is nothing, therefore, either in the spirit or in the letter of the law, to prevent a foreigner from denouncing a mine in the border zone and subsequently forming a Mexican corporation, in which he may hold practically all the stock, to take over and operate his mining interests so acquired.

LUNCHEON IN HONOR OF MR. ANDREW CARNEGIE ::

ON Thursday, December 16, Mr. JOHN BARRETT, the Director of the International Bureau of the American Republics, gave a luncheon at the New Willard Hotel, in Washington, D. C., in honor of Mr. ANDREW CARNEGIE, who had come to the capital for the purpose of participating in the dedication exercises of the new Carnegie Institution. The luncheon was informal and in recognition of Mr. CARNEGIE's generous gift for the construction of the new building of the International Bureau which will probably be dedicated in March or April of this year. There were no formal addresses, but, in response to the suggestion of the Director, Señor Don JOAQUIN BERNARDO CALVO, the minister of Costa Rica, made a few remarks in appreciation of Mr. CARNEGIE's interest in the International Bureau, and then Mr. CARNEGIE himself made appropriate response, emphasizing his great interest in Pan-American affairs and referring to the fact that he had watched closely the development of Pan-American friendship, peace, and commerce ever since he had served as a delegate of the United States at the first Pan-American Conference, presided over by JAMES G. BLAINE, in 1889-90. The luncheon was served in the Cabinet Room of the New Willard, the walls of which were decorated with the flags of the twenty-one American republics. The list of those invited by the Director to meet Mr. CARNEGIE included the following:

The Secretary of State, PHILANDER C. KNOX.

U. S. Senator, ELIHU ROOT.

The Ambassador of Brazil, JOAQUIM NABUCO.

ENRIQUE CREEL, Special Ambassador of Mexico.

The Assistant Secretary of State, HUNTINGTON WILSON.

HENRY WHITE, late United States Ambassador to France.

The Minister of Costa Rica, J. B. CALVO.

The Minister of Bolivia, IGNACIO CALDERON.

The Minister of Argentina, EPIFANIO PORTELA.

The Minister of Ecuador, L. F. CARBO.

The Minister of Uruguay, LUIS M. LAFINUR.

The Minister of Guatemala, LUIS TOLEDO HERRARTE.

The Minister of Salvador, FEDERICO MEJIA.

The Minister of Chile, ANIBAL CRUZ.

The Minister of Honduras, LUIS LAZO A.

The Minister of Panama, C. C. AROSEMENA.

The Minister of Haiti, H. PAULEUS SANNON.
The Minister of Cuba, CARLOS GARCIA VELEZ.
The Minister of Venezuela, P. EZEQUIEL ROJAS.
The Minister of the Dominican Republic, EMILIO C. JOUBERT.
The Chargé d'Affaires of Mexico, BALBINO DAVALOS.
The Chargé d'Affaires of Peru, MANUEL DE FREYRE Y SANTANDER.
Counselor of Brazilian Embassy, R. DE LIMA E SILVA.
U. S. Senator AUGUSTUS O. BACON.
Congressman DAVID J. FOSTER.
U. S. Minister to Uruguay, Gen. E. C. O'BRIEN.
Ex-United States Senator HENRY G. DAVIS.
Gen. GEORGE W. DAVIS, U. S. Army, retired.
Prof. R. S. WOODWARD, President of the Carnegie Institution.
THOMAS F. WALSH.
WILLIAM E. CURTIS.
Rev. WILLIAM T. RUSSELL.
Dr. FRANCISCO J. YANES, Secretary of the International Bureau.
W. T. S. DOYLE, of the Latin-American Division of the State
Department.
GEORGE W. FISHBACK, Special Commissioner of the Argentine
Exhibition.
ALBERT KELSEY.
Capt. GRANVILLE R. FORTESQUE.



SUBJECT-MATTER OF CONSULAR REPORTS

Reports received to December 1, 1909.

Title.	Date of report.	Author.
ARGENTINE REPUBLIC.		
Wheat lands in Argentine Republic.....	Sept. 28	R. M. Bartleman, Consul-General Buenos Aires.
Direct cable from Argentine Republic to Europe	do	Do.
Education in Argentine Republic	Sept. 29	Do.
Trans-Andine tunnel	Oct. 4	Do.
Primacy of Argentine Republic among grain-producing countries.	Oct. 6	Do.
Exhibitions—Centenary of 1910 in Buenos Aires.....	Oct. 7	Do.
BRAZIL.		
Leasing of the new port works at Rio de Janeiro.....	Oct. 4	J. J. Slechta, Deputy-Consul-General, Rio de Janeiro.
Real estate rents in Rio de Janeiro	Oct. 5	Do.
Trade of Brazil.....	Oct. 7	Do.
Japanese immigration to Brazil	Oct. 8	Do.
CHILE.		
Waterworks systems in Chile	Oct. 14	Alfred A. Winslow, Consul-General, Valparaiso.
Ties for Italian railways.....	Oct. 30	Do.
COLOMBIA.		
Export tax on metals.....	Oct. 25	Eugene Betts, Vice-Consul-General, Bogota.
CUBA.		
New personal effects of passengers liable to duty in Cuba.....	Nov. 10	James L. Rodgers, Consul-General, Havana.
HONDURAS.		
The economic review of Honduras	Oct. 14	Samuel McClintock, Consul, Tegucigalpa.
Electric light concession for Puerto Cortez	Oct. 18	Do.
Mining in Honduras	Oct. 21	Do.
MEXICO.		
Concession for a railroad	Oct. 31	L. J. Keena, Consul, Chihuahua.
Annual report on commerce and industries for 1908.	Nov. 3	H. P. Coffin, Consul, Mazatlan.
Telephone lists of the cities of Durango and Torreon.	do	C. M. Freeman, Consul, Durango.
Possible market for American corn; competition of Argentine Republic.	Nov. 4	Geo. B. Schmucker, Consul, Ensenada.
New steamship line between United States and Mexico.	Nov. 6	Do.
Guayule industry	do	L. J. Keena, Consul, Chihuahua.
Free importation of raw material into Mexico	Nov. 9	W. W. Canada, Consul, Veracruz.
Petroleum at Tampico	Nov. 11	P. M. Griffith, Consul, Tampico.
Concession for the building of a 100-ton smelter at Temosachic, Chihuahua.	Nov. 13	L. J. Keena, Consul, Chihuahua.
The cotton industry of the Laguna district	Nov. 15	C. M. Freeman, Consul, Durango.
Guayule rubber industry in Torreon	do	Do.
Promotion of farm industry by boards of trade.....	Nov. 20	C. P. Mitchell, Vice-Consul-General, Mexico City.
Dried fruits, etc., of Mexico	Nov. 24	Do.
NICARAGUA.		
Executive decree declaring ordinary laundry soap free of import duty in Nicaragua for four months.	Nov. 26	Henry Caldera, Vice-Consul, Managua.
URUGUAY.		
Canalization of the Rosario River	Oct. 14	F. W. Goding, Consul, Montevideo.
Tariff for docking vessels in Montevideo	Oct. 23	Do.
VE涅ZUELA.		
Commission to study banana industry in the State of Zulia.	Oct. 22	Isaac A. Manning, Consul, La Guiara.
Freight rates on the Tuy River	Oct. 25	Do.
Opportunities for sale of furniture in Venezuela	Oct. 27	Do.
Wrapping paper in Venezuela	Oct. 29	Do.
Schoolbook trade in Venezuela	do	Do.

ARGENTINE REPUBLIC

FOREIGN COMMERCE, NINE MONTHS OF 1909.

Statistics of Argentine commerce for the first nine months of 1909 record imports valued at \$220,592,551 and exports \$326,837,082. For the first-named classification an increase of \$20,307,131, and for the latter of \$29,290,555 is noted as compared with the corresponding period of the previous year. The trade balance in favor of the country's exports is \$106,244,531.

Gold imports during the period amounted to \$58,584,824, or \$34,479,954 more than in the first nine months of 1908, and exports amounted to \$1,245,650, the balance retained in the country being \$57,339,174.

Imports from Great Britain amounted to \$74,140,137, an increase of \$3,402,377; from Germany \$32,486,192, an increase of \$3,672,298; from the United States, \$29,238,328, an increase of \$3,361,113; from France, \$23,511,349, an increase of \$3,400,521; from Italy, \$20,415,965, an increase of \$2,123,872; from Belgium, \$10,082,894, an increase of \$570,207; from Spain, \$6,912,529, an increase of \$451,345, and from Brazil, \$5,891,811, an increase of \$820,756. With the exception of Brazil, commerce with the countries of South America is proportionately small, Uruguay ranking next to Brazil as a source of imports, with \$1,882,213.

Of exports \$68,309,156 were sent to Great Britain, an increase of \$9,103,514 being recorded. To the same destination are also sent 60 per cent of the shipments "to orders." Exports to France and to the United States increased by \$9,546,111 and \$9,267,337, respectively, as compared with the same period of 1908, the totals being \$28,372,697 and \$18,533,032, the latter sum representing more than a cent per cent increase. Belgium ranks next to Great Britain as a receiver of Argentine exports with \$35,849,711, but the increase was only \$6,346,754. Germany's purchases were represented by \$28,115,150, with an increase of \$2,220,601, and Italy, with a larger percentage of increase than the United States, bought to the value of \$9,235,918.

Exports to Brazil amounted to \$12,576,706, an increase of \$1,700,137; to Chile, \$1,791,090, an increase of \$632,550, and to Uruguay, Bolivia, and Paraguay, shipments were worth \$1,076,027, \$443,825, and \$133,930, respectively.

Principal items of exports in tons were as follows: Chilled and frozen beef, 155,347; frozen mutton, 55,356; sheep and goat skins, 24,225; salted hides, 40,246; dry hides, 20,501; horsehides, 1,257; wool, 131,221; jerked beef, 8,499; butter, 2,208; tallow and melted

fat, 43,932; bones, 16,565; oats, 419,665; barley, 18,543; linseed, 819,694; maize, 1,837,274; wheat, 2,435,718; flour, 87,475; bran, 152,655; hay, 22,187; quebracho extract, 39,171; quebracho logs, 206,577.

CEREAL AREA IN 1909.

In 1909 the number of hectares of wheat, linseed, and oats under cultivation in the Argentine Republic according to the official record was 5,836,550, 1,455,600, and 572,600, respectively, as compared with 6,205,300 hectares of wheat, 1,534,300 of linseed, and 633,300 of oats in 1908.

INTERNAL REVENUE, FIRST NINE MONTHS OF 1909.

The internal revenue of the Argentine Republic, according to the returns for the first nine months of 1909, as compared with that collected during the same period of the previous year, is shown in the following table:

[Expressed in currency.]

Item.	1908.	1909.	Item.	1908.	1909.
Alcohol	\$11,418,071	\$11,414,967	Wines.....	\$80,003	\$136,472
Tobacco	14,849,061	16,304,234	Specifics	573,000	709,551
Beer	2,436,657	2,696,778	Fines, etc	200,636	165,228
Matches.....	2,800,576	2,331,277	Insurance.....	476,083	532,249
Cards.....	150,280	187,129	Insurance (gold)	24,511	23,383

There was a slight decrease in revenues on alcohol and wines in 1909 as compared with 1908, and a very small decrease in the gold receipts for insurance in 1909 as compared with the previous year. The gross income in paper for 1909 was \$34,531,034, as compared with \$32,559,624 in 1908, or an increase for the former over the latter year of \$1,971,410.

THE TEXTILE INDUSTRY.

The Argentine Republic imports annually several millions of dollars worth of yarns, fabrics, and cordage manufactured out of vegetable fibers, notwithstanding the fact that many portions of the country are exceedingly rich in natural and cultivated fiber-producing plants, such as hemp, flax, ramie, and cotton. An excellent opportunity, therefore, exists for the manufacture in the country, out of native fibers, on a large scale, of articles of the class referred to. In 1908 the Argentine Republic imported harvest twine to the value of \$1,839,393; cotton yarn or thread, \$1,571,371; jute sacks, \$523,715; cotton sacks, \$468,276; and jute cloth, \$464,871. It is estimated that articles could be manufactured in the Republic, out of fibers produced in the country, that would have a sale of \$20,000,000 annually.

WHEAT AND FLOUR INDUSTRY.

The first Argentine mill for the grinding of cereals was erected in Cordoba in 1585. In 1878 the industry had grown to such importance as to leave a surplus for export of 2,918 tons of flour and 2,547 tons of wheat. In 1880 the imports of flour and wheat were 4,600 and 18,581 tons, respectively, the exports of flour being reduced to 1,428 tons and those of wheat to 1,166 tons. In 1887 there was a surplus of flour and wheat for export of 5,401 and 238,000 tons, respectively; in 1889 the exports of flour and wheat, respectively, were 3,361 and 22,806 tons, and the imports of flour during the same year were 3,361 tons.

In 1891 the production of flour in the Argentine Republic was 315,000 tons; in 1901, 495,000; in 1905, 715,000; and in 1907, 698,000 tons. In 1907 about 60 per cent of the flour produced in the Republic was manufactured in the city and Province of Buenos Aires.

Nearly all the exports of Argentine flour go to Brazil, that country taking 71 per cent in 1895, 88 per cent in 1906, and 92 per cent in 1907.

The consumption of Argentine flour at home in 1907 amounted, in round numbers, to 570,000 tons, or about 95 kilograms per capita.

In 1908 there were 350 flour mills in operation in the Republic, 156 of which were run by steam power, 155 by water power, and 39 by gas, electric, and animal power.

The wheat ground in 1907 amounted to 1,021,251 tons, which produced 697,863 tons of flour, or a yield of 68.3 per cent. The total capacity of the Argentine flour mills is 1,400,000 tons annually.

BANK BALANCE IN BUENOS AIRES, SEPTEMBER, 1909.

A statement of the condition of the banks in the city of Buenos Aires on September 30, 1909, shows the deposits on that date to have been \$34,136,162 gold and \$1,013,544,848 currency; discounts and overdrafts, \$30,944,038 gold and \$908,869,443 currency; and the cash balances, \$70,367,576 gold and \$315,292,328 currency. On September 30, 1908, the balances of these banks were as follows: Deposits, \$24,257,974 gold and \$173,005,549 currency; discounts and overdrafts, gold, \$30,018,301, and \$722,987,887 currency; and cash balances, \$44,662,978 gold and \$238,040,961 currency.

OFFICIAL EXHIBITIONS OF THE CENTENNIAL CELEBRATION.

The Argentine National Commission has announced the following official exhibitions to be held in Buenos Aires in connection with the Centennial Celebration in 1910: International Agricultural Exhibition, National Industrial Exhibition, International Fine Arts Exhibition, International Exhibition of Hygiene, and International

Railways and Land Transport Exhibition. There will also be an International Exhibition of Foodstuffs, but this is not classed as an official exhibition. Preceding the opening of the Centennial Celebration there will be a reception of ships, delegates, and representatives of foreign governments, an official reception in the Government Palace, and an illumination of the city. On May 25 the national anthem will be played in the Mayo Plaza, the school children will parade, a Te Deum will be sung in the cathedral, the corner stone of the independence monument will be laid by the President, the troops will be reviewed at Palermo, and a gala performance will be rendered at Colon Theater.

Other festivities throughout the exposition period will include:

Nautical entertainments in the port, with the cooperation of foreign and native ships. Inauguration of the Centennial Expositions: Agricultural stock, industrial, hygiene, art, and railway and land transport. Opening of Congresses: Scientific, Americanists, and Woman's National Hygiene. Inauguration in San Martin Plaza of the monument of the armies of independence. Inauguration of the monument and statues of the members of the first board. Laying the corner stones of statues, and of the different heroes of independence. Inauguration of the Congress Plaza and laying in it of the corner stones of the following monuments: Assembly of 1813, Congress of 1816, and Congress of 1853. Reception at the Congressional Palace. Reception and inauguration of the monuments presented to the Argentine Republic by the different groups of foreign residents: British, French, Spanish, Italian, Swiss, and Austro-Hungarian. Athletic and equine contests. Great concourse of races in the Argentine Hippodrome. Receptions at private clubs. Visits to the interior of the country, ranches, etc. Literary festivities. Popular celebrations in general. Farewell to the foreign delegates.

INSURANCE, FIRST HALF OF 1909.

During the first half of 1909 the total premium income from foreign insurance in the Argentine Republic was \$854,740 gold and \$3,213,815 currency, as compared with \$806,984 gold and \$2,896,315 currency in 1908. These figures represent fire, marine, life, and accident insurance. The premium income covering domestic insurance in the Republic during the first six months of 1909 was \$208,020 gold and \$8,140,157 paper, as compared with \$293,130 gold and \$7,047,040 paper during the same period of 1908.

BUDGET FOR 1910.

The amount of the budget expenditure authorized by the Argentine Congress for 1910 is \$267,038,091.31 national money, and estimated receipts are \$265,483,094.59. The issue of \$300,000,000 national

money (£25,000,000) in bonds, has also been sanctioned by the Congress.

MEAT EXPORTS, FIRST NINE MONTHS OF 1909.

During the first nine months of 1909 the exports of mutton and lamb carcases from the Argentine Republic aggregated 2,237,554, as compared with 2,255,960 in the first nine months of 1908, while the exports of quarters of frozen and chilled beef during the same period amounted to 1,886,154, as compared with 2,626,856 during the same period of 1908. The exports of carcases of mutton and lamb in 1908 were 3,265,879, and the exports of quarters of frozen and chilled beef for the same period were 2,292,449.



BANK STATEMENT, JUNE 30, 1909.

Mr. José Gutiérrez Guerra has prepared some interesting data concerning the operations of the banks of Bolivia during the first half of 1909. On December 31, 1908, the coined gold on hand in the five banks of issue of the Republic amounted to Bs. 5,631,193.75, as compared with Bs. 5,780,156.25 on June 30, 1909, an increase of Bs. 148,962.50, or £11,917. On the other hand, a decrease of Bs. 256,598.53 and Bs. 20,356.20, respectively, is noted in silver and nickel coins on June 30, 1909, as compared with December 31, 1908. The decrease in silver coin was due to the exportation by the Industrial Bank, in accordance with an order of the Government, of Bs. 227,000.

The foregoing figures do not include the transactions of the Bank of Bolivia and London, an institution recently established in the Republic, and whose figures are not available, no statement of that bank having yet been published, but comprises the operations of the National, Francisco Argandoña, Industrial, Agricultural, and Merchantile banks.

THE TIN DEPOSITS OF THE REPUBLIC.

The tin deposits of the Bolivian Republic comprises the fields of Tres Cruces or Quimsa Cruz and the districts of Negro Pabellon, Huanuni, Llalagua, Uncia, Totoral, Antequera, and Avicaya. On the west or Oruro side of the Cordillera Real the country is a dry, bare, table-land, between 12,000 and 13,000 feet above sea level, formerly the bed of an ancient inland sea, and on the east the country slopes rapidly, forming the tropical forests of the Amazon and the Paraguay.

Tres Cruces, including the district of Santa Vela Cruz, lies about 90 miles north of Oruro in the center of the Cordillera Real. The Concordia lode of the Santa Vela Cruz group of mountains lies at an altitude of 16,000 feet, following approximately the strike of the country rock which comprises a series of beds passing through all the gradations from quartzite to quartzite schist. The Elisa lode, also part of the Concordia mine, is tin bearing where it passes through one of the belts of white granular quartzite.

Adjoining the Concordia is the Coya mine, and 15 miles to the northwest lies the Monte Blanco mine, with the Barrosa Cota 3 miles to the southeast. The San Roque mine and "La Boliviana" lie on the southwest slopes of Santa Vela Cruz.

To the southeast of Oruro lies the Oruro tin field, a huge flow of andesite covering an area of at least 500 square miles. The nearest outcrop is at Negro Pabellon, from which point it passes east of Huanuni and north of Llalagua and to the south of Berenguela. Most of the mines of the Oruro district are situated close to the edge of this flow. The mines of Negro Pabellon lie 20 miles east of Oruro. To the north and east of the mines lies the andesite; to the south and west is the quartzite schist. It is in the latter rock that the tin deposits are found.

About 30 miles southeast of Oruro lies the famous hill of Posoconi, through which hill runs the Cararicagua lode, forming one of the richest tin deposits of Bolivia. It was worked long ago by the Spaniards, the group of mines being usually called "Huanuni," from the village at the foot of the hill. The geology of the district is practically the same as that of Negro Pabellon, quartzite schist and quartz porphyry covered in some places by andesite.

To the north of Huanuni lies the Morococala group, destined to become as important as their neighbor, and 15 miles to the south is the Pazna group, where about six lodes are at present being worked.

The mines of Llalagua and Uncia are situated 30 miles east of Huanuni and comprise what are possibly the richest tin mines in the world. In the Llalagua mine of the San Jose lode 2 meters of soft iron oxide are to be seen which would probably average 20 per cent tin. In the San Salvadora mine, belonging to the group there is a dense sulphide lode 2 feet in width and said to carry 25 per cent tin with values in bismuth and silver. In the Uncia mine an oxidized lode assaying from 6 per cent to 15 per cent metallic tin is being worked over a milling width of 18 inches.

The origin of these deposits is attributed to the "after action" of the quartz porphyry. The tin has always been present as oxide down to the present depth. One specimen supposed to be sulphide of tin proved on analysis to contain 35 per cent bismuth; 10 per cent tin

with sulphides of iron, antimony, arsenic, and a trace of copper, the tin being present as oxide and the bismuth as sulphide.

THE AMERICAN INSTITUTE AT LA PAZ.

A college conducted in the English, and known as "The American Institute," was established about four years ago at La Paz. This institution has proved so thorough and efficient and has given such great satisfaction in the curriculum prescribed that the Government has decreed that its certificates, or diplomas, shall admit the persons to whom issued to entrance in the universities of the Republic without the necessity of an examination.



FOREIGN COMMERCE, NINE MONTHS OF 1909.

Figures issued by the Statistical Bureau of the Brazilian Government show imports for the nine months, January-September, 1909, valued at 425,650:954\$ (\$133,000,000), compared with 430,201:831\$ (\$134,500,000) in the same period of the preceding year. These imports do not include specie and bank-note receipts, which aggregated, for the nine months, 23,388:954\$ (\$7,000,000).

Exports for the nine months amounted in value to 632,773:525\$ (\$197,500,000), against 451,521:399\$ (\$141,000,000) in the corresponding period of 1908.

While imports show a decline of \$1,500,000, exports show the remarkable increase of \$56,500,000, though the high valuations for 1907 were not attained. The trade balance of \$64,500,000 in favor of exports is the largest recorded in statistics covering the same months of the past three years.

Coffee shipped abroad in the amount of 9,847,504 bags was valued at \$95,300,000, an increase of 2,290,023 bags and \$25,500,000 being recorded as compared with the same months of 1908.

The remaining nine leading items, all of which show increased quantities, and, with the exception of cacao, increased valuations, were as follows:

	Kilos.	Dollars.	Dollars.
Rubber.....	27,891,248	60,000,000	+22,500,000
Tobacco.....	26,645,875	6,000,000	+ 2,000,000
Sugar.....	45,080,888	2,000,000	+ 1,800,000
Maté.....	40,144,478	5,500,000	+ 250,000
Cacao.....	22,675,151	5,400,000	- 1,500,000
Cotton.....	5,769,766	1,500,000	+ 750,000
Hides.....	28,276,589	7,000,000	+ 1,900,000
Skins.....	3,125,557	3,500,000	+ 1,000,000

• FOREIGN COMMERCE •

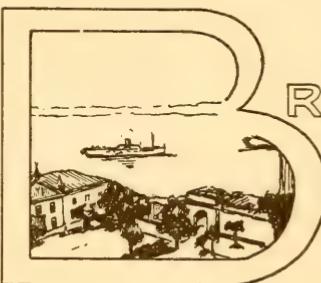
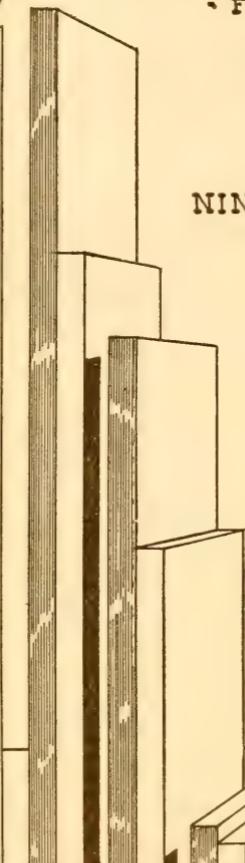
COMPARISON

NINE MONTHS - 1909

AND

NINE MONTHS - 1908

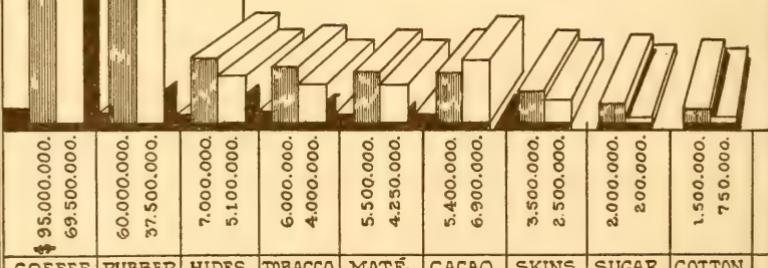
NINE LEADING EXPORTS



RAZIL

NOTE:-

WHITE BLOCKS ARE FOR 1908



INT. BUREAU OF AM REPS

AD 1909

COMPARATIVE STATEMENT FOR THE FIRST NINE MONTHS OF 1908 AND 1909 OF THE VALUE OF THE NINE LEADING EXPORTS OF BRAZIL.

SUBSIDIZED STEAMSHIP COMMUNICATION WITH SPAIN.

The chief of the Brazilian Propaganda Commission in Europe has reported to the Minister of Agriculture that a law has been passed by the Cortes for the granting of a subsidy and other favors to two trans-Atlantic lines between Spain and Brazil. The two lines are to be started in Spain and will run to Brazil and the Argentine Republic. The subsidy will amount to 670,000 *pesetas* (about \$150,000) per annum, and cotton, coffee, cacao, tobacco, and other Brazilian products will be exempt from the Spanish transport tax.

INTERNATIONAL TREATIES.

On November 5, 1909, the Brazilian Minister of Foreign Affairs, Baron RIO BRANCO, and the Minister from Peru in Rio de Janeiro, Dr. HERNAN VELARDE, concluded an arbitration treaty for the settlement of international questions between the two Republics interested.

On November 6 the treaty with Uruguay defining the frontier line with that country in so far as it affects Laguna Mirin and the Yaguaron River was signed. The treaty was concluded on October 30.

An arbitration treaty with Sweden has also been negotiated.

BUREAU OF ANIMAL INDUSTRY.

A Presidential decree promulgated October 21, 1909, creates a Bureau of Animal Industry under the Department of Agriculture, Industry, and Commerce. The property known as the "Pinheiro plantation" has been donated by the Government as an experiment station for the carrying on of investigations in animal breeding and feeding. The bureau will have charge of all matters relating to the live-stock industry, such as the inspection of stock, meat and dairy products, the investigation of diseases of cattle, the supervision of imports of stock made for breeding purposes, etc. The work of the bureau will be carried on under five heads, namely, (1) zootechnic section, (2) animal bromatology, (3) veterinary medicine and sanitary inspection of cattle, (4) dairy section, (5) economic section.

MODIFICATION OF ROUTE OF THE GOYAZ RAILWAY.

The Minister of Communications and Public Works signed on October 25, 1909, a new contract with the Goyaz Railway Company, whereby important changes are made in the route of this line, traversing the State of Goyaz. According to the revised contract, the railway will be built via Catalão, which, after the capital, Goyaz, is the most important city of the State. The contract provides for two branch lines, one to be run to Uberaba, the chief commercial and industrial center of the section known as the "triangulo mineiro,"

passing through Araxa, an important stock-raising and diamond-mining district, and another branch to connect Catalão with Araçay, the terminus of the Mogyana Railway.

The first section of the railway has already been opened to traffic, and extends from Formiga, the terminus of the West of Minas Railway, to Areias. Work on the line has progressed as far as Porto Real, beyond the San Francisco River.

The Government will build and operate the road on its own account, in place of giving a guaranty of 6 per cent on a capital of \$15,000 per mile to the contractors, as previously contracted. Five per cent bonds are to be issued to cover the cost of building.

LIVE-STOCK INDUSTRY IN THE REPUBLIC.

A report made by Vice-Consul-General SLECHTA, of Rio de Janeiro, states that the number of bovines in Brazil is about 25,000,000, distributed as follows: Rio Grande do Sul, 5,000,000; Matto Grosso, 3,000,000; Minas Geraes, 2,500,000; Ceara, 1,500,000; Parahyba, 800,000; São Paulo, 1,000,000; and Santa Catharina, 550,000. In the case of the latter State the figures are exact, inasmuch as they are taken from the official records made in tax collection, all live stock being taxed in that State. Basing an estimate on the trade in hides and skins, the number of cattle in Bahia may be safely said to reach 1,500,000. Piauhy also has a considerable stock-raising industry, but no estimate of numbers is available. In the State of Rio Grande do Sul, where the most important of the jerked-beef establishments are located, about 625,000 beeves are slaughtered each year for this class of meat. In the State of Matto Grosso, which has the next most important industry of the kind, about 605,000 cattle are slaughtered for the same purpose. In the following States the annual figures for slaughtering establishments are: São Paulo, beeves, 135,000; hogs, 132,000; goats, 6,000; and sheep, 9,000; Rio de Janeiro and the Federal District, 225,000 beeves; Minas Geraes, 325,000 beeves. The latter State exports (to other parts of Brazil) about 300,000 cattle yearly, of a value not far from \$7,500,000. The total value of all pastoral and dairy products supplied to other Brazilian States by Minas Geraes is about \$14,000,000 annually.

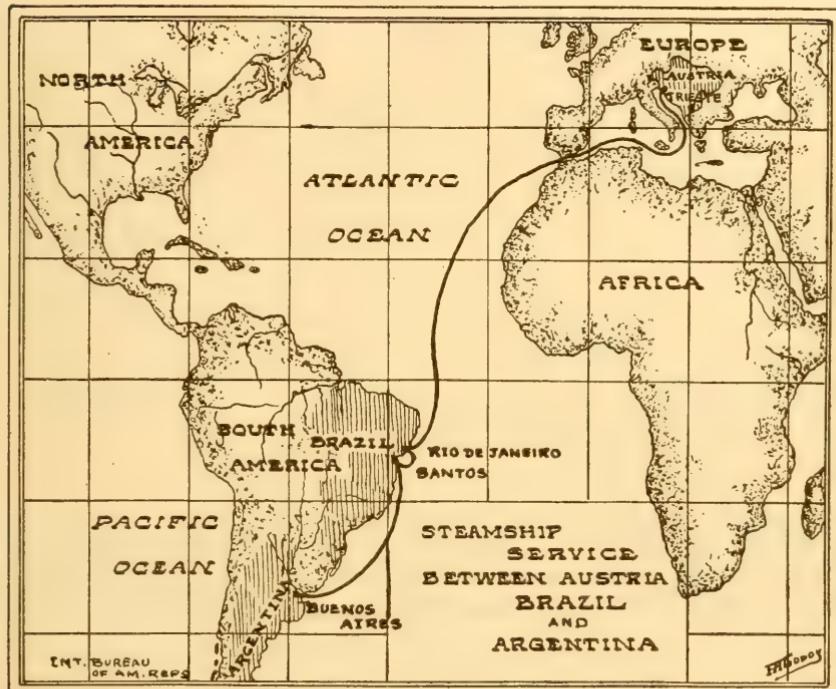
São Paulo is said to possess 235,000 horses, 125,000 mules, 65,000 sheep, 140,000 goats, and 1,300,000 hogs. Santa Catharina is recorded as possessing about 36,000 horses. Rio Grande do Sul, according to recently compiled figures, has 250,000 horses, and in a small portion of the State, represented by 13 districts, 13,000 mules were reported.

The total exports of hides from Brazil in 1908 were as follows, in metric tons: Salted hides, 23,314; dry hides, 7,095; goatskins, 2,579; sheepskins, 760; lambskins, 94; miscellaneous skins, 130. Of these

total exports, the State of Ceara furnished 90,000 to 100,000 hides, about 300,000 goatskins, and 100,000 sheepskins, weights not available. The total hides and skins annually exported from the State of Bahia amount to about 6,000 metric tons. The average number of hides exported from Rio Grande do Sul during the past three years is a little more than 900,000.

STEAMSHIP SERVICE BETWEEN AUSTRIA, BRAZIL, AND THE ARGENTINE REPUBLIC.

The Government of Austria has contracted with the Austro-American Navigation Company for the establishment of direct steamship



Map showing the route of a new steamship service recently established between Austria, Brazil, and Argentina.

service between Trieste, Austria-Hungary, and ports of Brazil and the Argentine Republic. The steamers of the new line will touch at Rio de Janeiro and Santos, in Brazil, and at Buenos Aires. The duration of the contract is for a period of fifteen years.

BROMELIA PLANT FOR THE MANUFACTURE OF PAPER.

In a recent issue of the "*Messager de São Paulo*" attention is called to the possibilities of using the bromelia plant in the manufacture of paper. This plant flourishes along the Brazilian coast, growing luxuriantly in the vicinity of many of the ports of the Re-

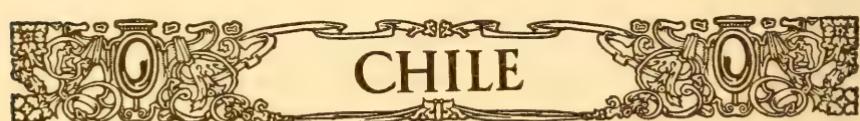
public. For instance, at the port of São Joã da Barra, about 60 miles of the shores of the bay are entirely covered with an apparently inexhaustible supply of the bromelia plant. It is stated that paper of a superior quality could be made from this plant. One kind of bromelia could be used for the manufacture of paper of a fine quality, and the export of this plant in its natural state would be remunerative. In connection with this prospective industry it should be borne in mind that a little farther back in the interior immense quantities of material suitable for the manufacture of wood pulp could be obtained at a comparatively slight cost, and the two industries could easily be exploited together.

COLONIZATION OF JAPANESE.

From Rio de Janeiro, United States Vice-Consul-General SLECHTA reports that another experiment is to be made in the matter of employing Japanese laborers on the plantations of Brazil. A syndicate operating in Japan, engaged in mining, transportation, and other industrial enterprises, has purchased a large tract in the State of Rio de Janeiro with the intention of locating thereon a colony of Japanese to engage in agriculture.

The land lies along the coast below Cape Frio, about 40 miles from the capital and about 4 miles from the Leopoldina Railroad.

Rice, coffee, vanilla, and vegetables for the supply of the Rio markets are to be grown and special effort will be made to exploit the timber resources of the vicinity.



CHILE

LIVE STOCK IN THE REPUBLIC.

United States Consul ALFRED A. WINSLOW writes from Valparaiso that, according to the best information obtainable, there were in Chile at the beginning of 1909, approximately 700,000 horses and mules, 2,500,000 head of cattle, 3,000,000 sheep, 500,000 goats, and 300,000 hogs. About 450,000 cattle, 600,000 sheep, and 140,000 hogs are slaughtered annually. There are no published reports covering the matter of hides, but from general information it can be gathered that the stock on hand is comparatively small, since the exports of tanned leather have been rather heavy, amounting to 3,546,730 pounds in 1907 and 4,237,420 pounds in 1908. The exportation of hides for 1908 was 3,496,020 pounds, as compared with 2,294,148 pounds in 1907.

DEPOSITS IN SAVINGS BANKS ON SEPTEMBER 30, 1909.

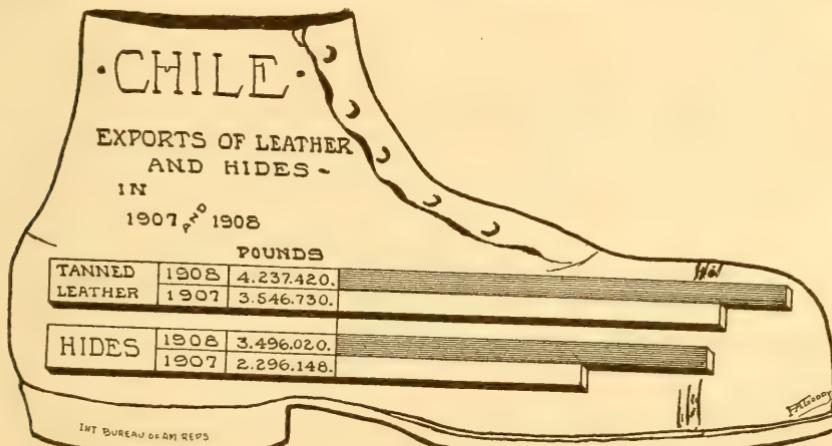
The deposits in the savings banks of the Republic of Chile on September 30, 1909, aggregated ₩27,588,920.22, as compared with ₩27,486,548.26 on August 30 of the same year, or an increase in the September deposits over those of August of ₩102,371.96.

TAX ON APPLICATION FOR LETTERS PATENT.

On and after the first day of January, 1910, the law of September 7, 1909, requires payment by inventors soliciting letters patent of the sum of ₩100, prescribed by No. 55 of article 3 of said law.

NEW CONSULAR TARIFF.

The new Chilean consular tariff, published in the official bulletin of the Republic on October 12, 1909, will become effective ninety



Comparative statement for 1907 and 1908 of exports of leather and hides from the Republic of Chile.

days after that date, or in January, 1910. The new law consists of twenty-one articles, and covers the charges and fees of the consuls of Chile for all kinds of official services.

LIBERAL PROFESSIONS CONVENTION RATIFIED.

The United States Department of State has been informed, through the Mexican Embassy, at Washington of the formal ratification by the Chilean Government of the convention relative to the practice of liberal professions, as signed by the delegates to the Second International American Conference on January 28, 1902.

SEALED PAPER AND DOCUMENT STAMPS.

The new law of the Republic of Chile governing the use of sealed paper and document stamps, signed by the President on September

7, 1909, and published in the "Official Gazette" of October 2 of the same year, prescribes the uses of the different kinds of sealed paper and document stamps. The denominations of sealed paper vary from 5 cents to \$10 and of document stamps from 1 cent to \$100.



INDUSTRIES OF MEDELLIN.

The principal industries of the thriving town of Medellin, Colombia, are the textile, glass, earthenware, match, and hat factories and iron foundries.

The textile industry is the most important. One of the mills, which has been in operation about five years, engages extensively in spinning and weaving. This mill has over 200 looms at work and in process of installation, and manufactures domestics, drills, and calicoes, for the entire output of which a good market is found. About a year ago a company opened its factory with 30 looms working and 50 more ordered. This company as yet does no weaving, but produces cotton goods of various grades and makes hosiery and underwear. Another company weaves by hand, manufacturing fabrics of coarse cotton, of wool, and of a native fiber called "*cabuya*."

Some of the iron foundries use material obtained in the vicinity and some import the raw product.

Hats are exported in considerable quantities, and a match factory is in operation.

Coffee and gold are the principal products exported, 120,000 bags of the former being shipped annually and about \$3,000,000 of the latter.

LIVE STOCK IN THE REPUBLIC.

The number of cattle in Colombia is reported by Vice-Consul-General BETTS at Bogota as approximately 4,000,000.

The following official statistics for 1907 are the latest obtainable of cattle slaughtered in the various departments in Colombia: Antioquia, 52,439; Atlantico, 19,099; Bolivar, no data; Boyaca, 16,870; Caldas, 19,578; Cauca, 49,388; Cundinamarca, 31,415; Galan, 27,748; Hudla, no data; Magdalena, 12,240; Nariño, no data; Quesada, 12,277; Santander, 38,713; Tolima, 30,481; Tundama, 6,626; District Capital, 24,654; total, 341,528.

The following statistics, in kilograms (kilogram=2.2 pounds), showing the exportation of hides for the years 1906 and 1907, are the last official statistics obtainable and have not yet been officially issued:

To—	1906.	1907.	To—	1906.	1907.
United States.....	2,195,621	1,328,720	Great Britain.....	686,778	66,120
Germany.....	701,367	1,632,372	Other countries.....	277,104	149,807
Spain.....	16,585	270,513	Total.....	3,879,375	3,447,562
France.....	1,920	.....		

EXHIBIT AT THE QUITO EXPOSITION.

The Colombian building and exhibits at the Quito Exposition were most creditable and of great interest to both Republics, and they are of still greater importance when the close diplomatic and commercial relations of the two countries are taken into consideration.

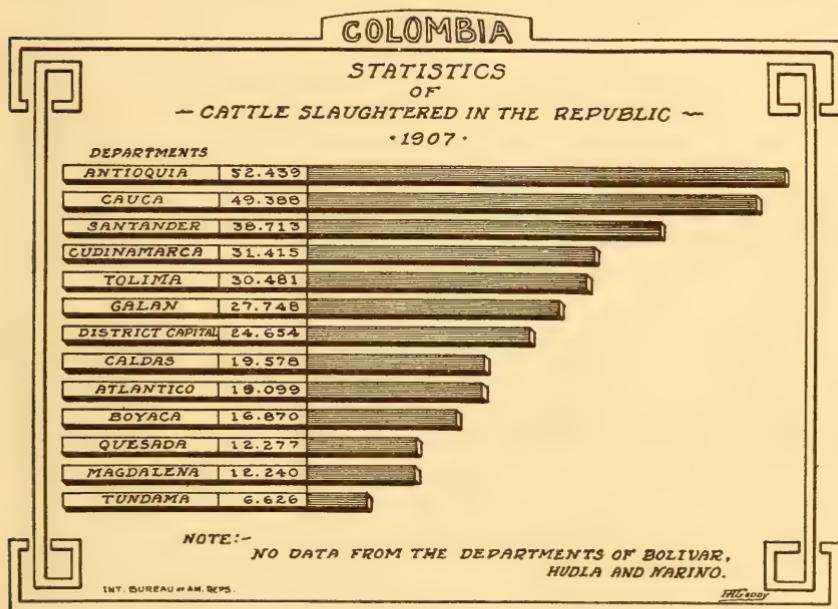


Diagram showing the total number of cattle slaughtered in the Departments of the Republic of Colombia during the year 1907.

The interior and exterior of the edifice were handsomely decorated, and the cornice of the principal hall was an admirable piece of work by the artist, FRANCISCO BARRIGA.

One of the most notable exhibits in the building, and which attracted a great deal of attention, was the glass exhibit by a Bogota firm, in which samples of glass bricks, blocks, flasks, bottles, and window panes were shown. The chocolate and beer exhibits were most interesting, as were also the tobacco and textile displays. The saddlery exhibit was one of great merit and was most artistically arranged, and the industrial, agricultural, and mineral products attracted widespread attention, and particularly the splendid exhibits of

cabinet and fine woods, medicinal herbs and plants, and the collection of birds and butterflies of the Republic.

TAX ON CONSUMPTION OF TOBACCO.

A law passed by the Congress of Colombia, and promulgated by the President on September 17, 1909, authorizes the respective departments of the Republic to impose taxes on the consumption of manufactured tobacco, but not upon the growing crops or raw material. The placing of an export tax upon tobacco in any form is likewise prohibited to the departments.

ARBITRATION CONVENTION OF PECUNIARY CLAIMS WITH ECUADOR.

The *ad referendum* convention for the settlement by arbitration of pending pecuniary claims between Colombia and Ecuador, made in Quito by the representatives of the two countries on April 15, 1909, has been approved by the Congress of Colombia and was promulgated by the President of the latter Republic on September 15, 1909. The full text of the convention is published in the "*Diario Oficial*," of Colombia, of September 20, 1909.



PARCELS-POST CONVENTION WITH MEXICO.

The parcels-post convention made between the representatives of Mexico and Costa Rica, and signed in the cities of Mexico and San Jose by the representatives of the two nations on June 21 and August 11, 1909, was approved by the Mexican Senate on October 18 of the same year, and promulgated by President DIAZ on October 21, 1909. The convention will become effective at a date to be agreed upon by the Postmasters-General of the two Republics, and will continue in force until twelve months after the date on which either of the parties in interest notify the other of its desire to terminate the convention.

CONCESSION FOR THE CULTIVATION OF FIBROUS PLANTS.

The Government of Costa Rica has granted a concession to A. HOLLIS WHITE, an American citizen, for the cultivation of a fibrous plant known as "*cabuya*," and other fiber-producing plants. For this purpose the State has donated to the concessionaire 10,000 hectares of government land, situated 5 kilometers to the west of the

city of San Ramon and bordering on the frontiers of the Republics of Nicaragua and Panama. The Government reserves the right to allot the land either in a single tract, or in several lots, as may best suit its convenience, but a third of the land is to be situated in the Province of Guanacaste. The State also gives the concessionaire the right to buy 10,000 more hectares of public land, within a period of five years, at \$1 per hectare. The tracts of land referred to are to be barren lands suited to the cultivation and growth of fibrous plants.

Within ten years from November 12, 1909, the date of the approval of the contract, 80 per cent of the donated land must be planted in fiber-producing growths. The industry is exempt from all federal and municipal taxes, and imports of machinery, apparatus, and supplies necessary to the exploitation of the industry may enter the Republic free of duty for a period of twenty years. The concessionaire has the right to construct tramways, buildings, wharves, storehouses, etc., and to the free navigation and use of the rivers that traverse the lands comprised in the grant.

A deposit of \$5,000 has been made with the Government as a guaranty for the faithful compliance of the terms of the concession, said sum to apply on the purchase price of the additional 10,000 hectares of government lands which the concessionaire has the right to acquire under the terms of the contract.



TRADE WITH THE UNITED STATES, NINE MONTHS OF 1909.

Trade figures covering transactions with the United States during the nine months January-September, 1909, show exports from Cuba to the amount of \$97,524,612, against \$70,645,969 in the corresponding period of the preceding year, a gain of 27.56 per cent being thus indicated. On the side of imports a gain of 10.95 per cent is recorded, the figures for 1909 being \$34,425,834, and for the same months of 1908, \$30,652,956.

On this basis "*La Lucha*," a prominent Havana newspaper, calculates that the year's commerce between the two countries will aggregate \$155,000,000, composed of exports valued at \$108,000,000 and imports \$47,000,000.

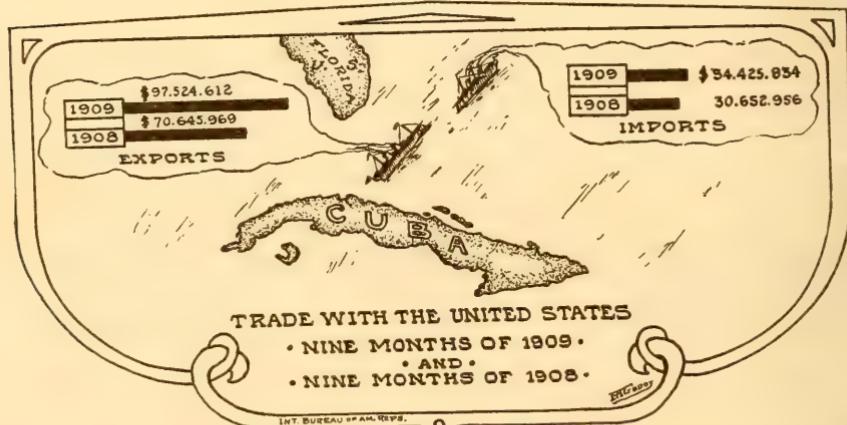
ASPHALT DEPOSITS.

In the vicinity of Mariel, near Havana, Cuba, there are large deposits of asphalt of an excellent quality. For a number of years

this asphalt has been used in paving streets in the United States, and for seven years has been in use in Chicago on streets having a heavy traffic, and has proved most durable and satisfactory. Within the past two years several streets have been paved in St. Louis with Cuban asphalt, and it is being used in considerable quantities in Kansas City, Washington, D. C., Oklahoma City, and Muskogee, Okla. Experiments made with this asphalt in London have given good results.

THROUGH FREIGHT SERVICE WITH NEW ORLEANS.

The Southern Pacific Steamship Company has inaugurated a through freight service from New Orleans, via Havana, to the ports of Sagua, Caibarien, Nuevitas, Puerto Padre, Gibara, Banes, Nipe, Baracoa, Guantanamo, and Santiago de Cuba, and now issue through bills of lading, in connection with the Herrera Line, to those ports. A steamship service between New Orleans and Havana has been



Comparative statement for the first nine months of 1908 and 1909 of the commerce of the Republic of Cuba with the United States of America.

maintained for a number of years, but this new service will enable the merchants of the southern metropolis to ship goods direct to the points mentioned without the necessity of sending them via Mobile, and will doubtless stimulate to a considerable degree the trade of the Crescent City with Cuba.

NEW ISSUE OF POSTAGE AND TELEGRAPH STAMPS.

A new issue of postage and telegraph stamps will be placed in circulation in Cuba on January 1, 1910.

The 1-cent postage stamps will bear the bust of BARTOLOMÉ MASÓ; the 2-cent, that of MÁXIMO GÓMEZ; the 3-cent, that of JULIO SANGUILY; the 5-cent, that of IGNACIO AGRAMONTE; the 8-cent, that of

CALIXTO GARCÍA; the 10-cent, that of JOSÉ MARÍA RODRÍGUEZ; the 50-cent, that of ANTONIO MACEO; the \$1, that of CARLOS ROLOFF; and the 10-cent special-delivery, that of JUAN BRUNO ZAYAS.

The picture of BERNABÉ Boza will appear on the 1-cent telegraph stamps; that of JOSÉ LACRET on the 2-cent; that of FLOR CROMBET on the 3-cent; that of A. MORENO DE LA TORRE on the 5-cent; that of OSCAR PRIMELLES on the 10-cent; that of JOSÉ MARÍA AGUIRRE on the 20-cent; and that of NARCISO LÓPEZ on the 50-cent.

REGISTRATION OF BANKS, INDUSTRIAL AND COMMERCIAL COMPANIES.

A recent executive decree of Cuba provides for the registration, in the Bureau of Commerce and Industry, of the Department of Agriculture, Commerce, and Labor, of all the banks, industrial and commercial companies now doing business or which may be organized in the island. The Bureau of Commerce and Industry must render to the Secretary of Agriculture, Commerce, and Industry in September of each year a detailed report of the operations of said enterprises, illustrating same with statistics and tables compiled from data gathered by the bureau.



LAW REGULATING CONCESSIONS OF PUBLIC LANDS.

On September 29, 1909, President RAMÓN CÁCERES issued a decree regulating the concession of public lands in the Dominican Republic. Under the terms of this decree the individual or corporation desiring to obtain permission to cultivate the public lands of the State is required to make an application on sealed paper to the Department of Agriculture and Immigration, stating that the land is unoccupied, the number of hectares desired, the province, community, and section in which it is situated, and its boundaries. The purpose for which it is to be used must also be specified, as well as the nationality of the applicant.

All the provisions of the law of June 9, 1905, must be complied with, and one-eighth of the grant must be cleared, fenced, and settled upon within one year from the date of the permission of the department to enter upon the land. Unless a special permit is obtained from the President of the Republic, only native laborers or European immigrants can be employed to work on the land.

If the Department of Agriculture and Immigration grant the application to take possession of the land, a bond must be furnished by the applicant, except in the case of citizens of the Republic who desire tracts of land containing less than 50 hectares.

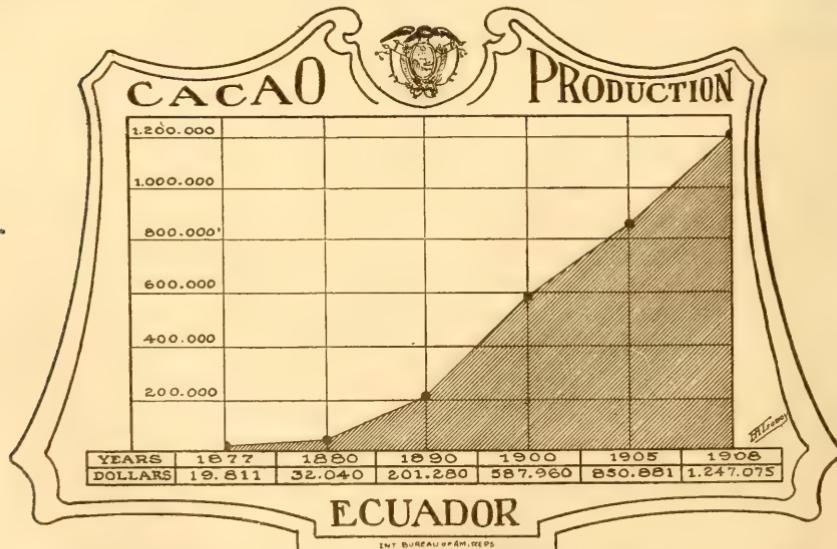
When the concessionaire has cleared, settled upon, and fenced at least 50 hectares of the land, he may petition the Treasury Department for the return of the deposit corresponding to the 50 hectares, and repeat the petition with each succeeding 50 hectares until the whole amount of the deposit guaranty has been refunded. A failure to comply with the terms of the concession will cause the land, its appurtenances, and the deposit to be forfeited to the Government.

After ten years' occupation and cultivation in accordance with the terms of the concession, the concessionaire agrees to pay annually, in advance, 10 cents gold per hectare for the land included in the concession.

ECUADOR

EXPORTS OF CACAO FROM 1877 TO 1908.

The "Grito del Pueblo," of Guayaquil, published on October 12, 1909, a table showing the value of the exports of Ecuadoran cacao



Statement showing the value of cacao produced in the Republic of Ecuador from 1877 to 1908.

from 1877 to 1908, inclusive, the exports having increased in value from \$20,000 in the former year to \$1,280,000 in the latter.

ARBITRATION CONVENTION WITH THE UNITED STATES.

On October 21, 1909, the Government of Ecuador through its Executive, President ELOY ALFARO, formally approved the convention of arbitration celebrated on January 7, 1909, between Señor LUIS FELIPE CARBO, Envoy Extraordinary and Minister Plenipotentiary of Ecuador in Washington, and Hon. ELIHU ROOT, Secretary of State of the United States.

CONCESSIONS TO THE PRESS.

A federal law, promulgated by President ALFARO on October 26, 1909, prescribes that printing paper shall pay the minimum railroad freight rate collected on any article of merchandise carried by the railroad companies in Ecuador and in cities where daily newspapers or publications are issued that the directors of the same shall appoint two agents, who shall be given free transportation on railway trains, for the purpose of selling said publications. It is further provided that the daily papers of Quito and Guayaquil, and those that may be established in other cities of the Republic, shall have a daily telegraphic franking privilege for 200 words of news, and shall pay one-half cent for each additional word of newspaper matter. Semi-weekly and weekly publications are entitled to the same privileges on 400 words per week. Government cablegrams, proper for publication, received at Guayaquil and Quito shall be translated and placed at the disposal of the press within an hour after their receipt, and such cablegrams will be telegraphed at government expense to the daily newspapers in the other towns of the Republic. All telegrams to the press are to be considered urgent.

WATER SUPPLY, PAVING, AND SANITATION OF GUAYAQUIL.

The Congress of the Republic has passed a law authorizing the Federal Government to aid the city of Guayaquil in securing an abundant supply of potable water and to assist it in the paving of the streets and the sanitation of the city. The municipality of Guayaquil will contribute 10,000 *sucres* (\$5,000) per month to the paving of the streets of the city, and the federal tax of 3 *sucres* (\$1.50) per head of cattle imported for consumption, with the exception of cattle entering the country through the Province of Carchi, is to be used in effecting the improvements referred to.

PAYMENT OF ADDITIONAL DUTIES ON IMPORTS.

A law passed by the Congress of Ecuador, promulgated on October 21, 1909, provides that from the first of the year 1910 the additional 10 per cent duty levied on imports for the payment of the internal debt may be paid in interest coupons already due, or in the bonds

selected by lot for redemption. Cash payments of this additional duty are to be deposited in the Agricultural and Commercial Bank, to be disbursed exclusively in the payment of the internal debt.

PROPOSED FINANCIAL MEASURES.

“*El Telégrafo*” of Guayaquil, in its issue of October 12, 1909, publishes an interesting message of the President of the Republic, containing recommendations concerning the modification of the proposed loan law, and in which he advises the raising of sufficient funds by means of a foreign loan to pay the internal debt, thereby liberating the revenues of the nation that have been hypothecated in security of the same. The obtaining of funds in this manner would enable the bankers of the country, who are large holders of the securities of the internal debt, to extend their operations to industry and commerce. The circulating medium would be increased, the rate of interest lowered, and a positive benefit would result to the whole country.

The President believes, in general, that the clauses relating to the proposed loan are good, but suggests that they be modified so as to permit the Executive to negotiate the placing of the £2,000,000 5 per cent gold interest-bearing bonds and 1 per cent amortization; that the collectors of the revenue be Ecuadoran citizens, appointed by the Government; that the expenses of collection be borne by the concessionaires; that the commission be 35 per cent of the revenues on salt, to be reduced to 30 per cent when the gross revenues exceed 600,000 *sucres* (\$300,000); that up to 1918 the commission on alcohol and tobacco be 20 per cent, from 1919 to 1922, 15 per cent, and from 1923 on, 10 per cent; that the commission be 20 per cent of the general revenues from 1910 to 1917, and 15 per cent thereafter; that the commission be 10 per cent on the sale of stamps up to 1916, and 6 per cent thereafter, and such commission on revenues not specified in the decree as may be agreed upon by the Executive.

It is recommended that the concessionaires shall not participate in the excess of the revenues until same exceed 15,000,000 *sucres* annually, after which 60 per cent of the excess is to be for the Government and 40 per cent for the collectors; when the receipts reach 20,000,000 *sucres* annually, 75 per cent is to go to the Government and 25 per cent to the contractors.

The President further recommends that the life of the contract for the collection of the revenues be fifteen years; that the contractors be given the postal, telegraph, and telephone franking privilege; and that on payment of the amount due to the Bank of Ecuador the export duty on cacao be reduced one-half.

IMPROVEMENTS AT THE PORT OF BAHIA.

In a message to the Congress, delivered by President ALFARO on September 29, 1909, the Executive recommends the canalization of the port of Bahia de Caraquez, one of the best ports of the Republic, so as to permit the entrance of vessels of deep draft, the construction of a wharf, and the building of the Marta to Santa Ana Railway. A railway is now being constructed from Quito to Bahia, and this line will greatly increase the commercial transactions of the port, and will develop and increase the commerce of the rich Province of Manabi. Several projects have been submitted to the consideration of the Congress, and capital can be obtained to carry them to a successful termination if satisfactory concessions are obtained. Large quantities of vegetable ivory and fibers are found in the country tributary to this port.


GUATEMALA

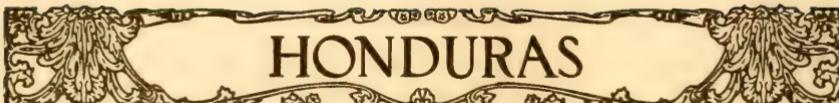
IMPORTS OF ELECTRIC SUPPLIES.

The President of the Republic of Guatemala, on October 21, 1909, issued a decree regulating the importation of material and supplies to be used by the electrical enterprises of the country and providing that no imports of articles of this nature shall be permitted to enter without first soliciting and obtaining the consent of the Department of War. Electric companies now doing business in Guatemala are required to give a statement to the aforesaid department of the electric material and supplies imported before this decree became effective.


HAITI

NEW BANKING COMPANY.

Minister H. W. FURNISS, at Port au Prince, sends information that on October 5, 1909, articles of incorporation were approved and license to do business in Haiti was granted to a banking concern styled "Banque Haitienne" to operate under the Haitian laws.



HONDURAS

INDUSTRIAL CONCESSIONS.

The following concessions for the establishment of stock ranches, electric-light plants, for timber exploitation, a soap factory, and the construction of a canal have been granted by the Government of Honduras:

STOCK FARM.

An important concession was granted on April 5, 1909, to JOHN HEPBURN, an English subject, for the establishment of a stock ranch, consisting of 35,000 hectares of public lands, situated in the Mosquitia Province, between the Patuca and Segovia rivers. Stock, consisting of cattle, horses, asses, and mules, to the number of 50,000 head, will be placed upon this ranch, as well as such a number of hogs, sheep, and goats as the concessionaire may deem desirable. The concession prohibits the cutting of fine timber for export or sale, but gives permission to cultivate up to 15,000 hectares of the land and the erection of the necessary stores, warehouses, etc., the establishment of a creamery and allied industries, a refrigerating plant for the conservation of meats, a plant for the manufacture of lard, and a soap and a candle factory. The concessionaire has the right to open wagon roads on the land and to construct tramways, railways, and wharves, and for this purpose has free use of the timber found on government lands in the vicinity. Animals for the ranch and imports of material for building and construction purposes are entitled to enter the Republic without the payment of duty.

ELECTRIC-LIGHT PLANTS.

A twenty-year concession has been granted to J. W. GRACE for the erection of an electric-light plant at Baracoa or Puerto Cortez, to be known as "The Puerto Cortez and Baracoa Electric Company." The company will furnish electric light to the neighboring towns and power to tramways, railways, and industrial enterprises. Permission is given for the construction of telegraph and telephone lines.

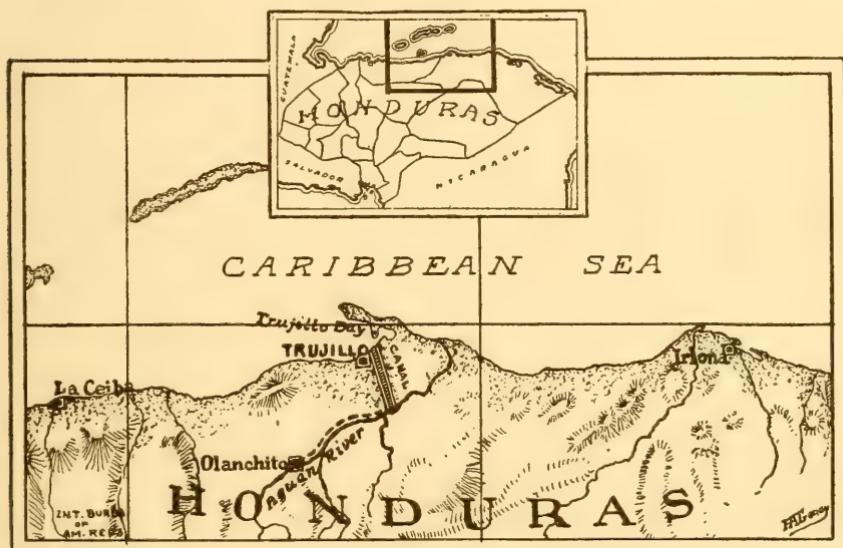
Another electric-light concession has been granted to MANUEL E. LARDIZABAL, for a period of twenty years, for the installation of an electric-light plant in the city of San Pedro Sula. The company will operate under the name of "Empresa de Luz Eléctrica de San Pedro-Sula" and will supply light and power for the same purposes as the electric company first mentioned.

EXPLOITATION OF TIMBER.

A concession has been granted to JOHN HEPBURN for the exploitation of fine timber in the national forests of the Atlantic coast between Colon and Mosquitia. The life of the concession is ten years, with the privilege of extending it for another period of ten years if agreeable to both parties.

SOAP FACTORY.

HERMAN ARGÜELLO has been granted a concession for the establishment of a soap factory at Choluteca, under the name of "La Industria Hondureña." The concession is for a period of fifteen years.



Map showing location of a canal to be constructed from the Aguan River, in the Republic of Honduras, to Trujillo Bay. This canal will be 40 feet wide and 6 feet deep, and will permit of the passage of vessels from Olanchito to the sea.

Certain raw materials used in the manufacture of soap may be imported free of duty.

CONSTRUCTION OF A CANAL.

ALFREDO BOESCH has been authorized to construct a canal to connect the Aguan River with Trujillo Bay, and to open up water communication to Olanchito, Department of Yoro, for the transportation of freight and passengers. The canal will be 40 feet wide and 6 feet deep. The concessionaire has the sole right to navigate the canal, and permission to construct a wharf on some convenient point on Trujillo Bay.

After the construction of 10 kilometers of the canal, the Government will grant to the concessionaire 150 hectares of public lands for each kilometer of canal constructed from Guaymoreto Lake to Aguan

River, and 100 hectares of land for each kilometer of canalization of the Aguan River. These lands will be situated along the canal or on the Aguan River. The materials and supplies imported for the construction and exploitation of the canal shall enter the Republic free of customs duties.

THE LIVE-STOCK INDUSTRY.

In the opinion of United States Consul McCLINTOCK at Tegucigalpa there is no country more suitably situated for raising cattle to supply the American market than is Honduras. It is less than 1,000 miles from the ports of eastern Honduras to New Orleans and Mobile, and the steamer connection is good. In soil, grass, and climate the Republic is well adapted to this industry. The greatest drawbacks to the industry at present are the lack of local transportation and the exclusion from the markets of the United States.

During 1904, the latest year for which complete figures are obtainable, 46,934 cattle were slaughtered for home consumption and 39,736 head were exported. During the fiscal year 1906-7 cattle to the value of \$133,735 were exported; during 1907-8, \$65,038 represented the export values. During the same two years the value of hides exported was \$66,313 and \$72,569, respectively. The export tax on male cattle at the present time is \$3 per head; on hides, \$1 per hundred pounds.

NEW LIGHT-HOUSES.

The Government of Honduras has recently entered into a contract for the construction and maintenance of two light-houses, one on the island of Utila, lying off the northeastern coast, and one on Cape Falso, near the extreme eastern coast. The lights are to be of the automatic acetylene-gas beacon type. The towers are to be not less than 100 feet in height. The contractor is to receive \$24,000 for the construction of the lights and \$2,400 a year for the maintenance of a good service for the period of twenty years. He is also to be exempt from the payment of all duties and taxes upon the materials used or upon the necessities of life for the men engaged upon the work. This contract is subject to the approval of Congress at its coming session, but the United States consul at Tegucigalpa states that there appears little doubt that it will be approved.

TERMINATION OF COMMERCIAL TREATY WITH GREAT BRITAIN.

The Government of Honduras has denounced the commercial treaty of January 21, 1877, with Great Britain. The treaty will therefore expire in October, 1910.



MEXICO

NAVIGATION CONTRACTS.

The "*Diario Oficial*" of November 6, 1909, publishes the full text of the contract made by the Government with M. JEBSEN, of Hamburg, Germany, for the establishment of steamship service on the west coast of Mexico with the United States and Central America. Steamers will run from Seattle, San Francisco, the port of Los Angeles, and San Pedro, in the United States, to Central American ports on the Pacific coast, touching at Manzanillo, Salina Cruz, and San Blas. A subvention of \$5,000 silver per month will be paid to the steamship company by the Mexican Government.

A contract has likewise been made by the Mexican Government with the Toyo Kisen Kaisha Navigation Company for the establishment of steamship service between Mexican ports and those of Japan. A subvention of \$10,000 silver per round trip will be paid by the Government to the steamship company, no greater sum than \$120,000 silver to be paid in any one year.

STATUS OF ZINC MINING.

The new United States duty on zinc ore of 1 cent per pound on the zinc contents of ore containing 25 per cent or more of zinc is reported by United States Consul KEENA at Chihuahua to have had the effect of shutting down the mines in the zinc districts of Chihuahua and Coahuila. A small amount of zinc is being shipped, but the percentage of decrease may be seen from the following figures of the zinc ore invoiced through this office: First six months of 1909, \$63,145; for the three months ended August 31, 1909, \$11,858, although from July 1 to August 6 of these three months the zinc ore was shipped under the old tariff. During 1908, shipments to the United States totaled 10,373 tons from the following states: Zacatecas, 5,804 tons; Coahuila, 1,886 tons; San Luis Potosi, 1,447 tons; various, 1,176 tons.

Under the new tariff the cost of delivering Mexican zinc ores to the Missouri and Kansas smelters is \$14.50 per ton. This is practically prohibitive at present prices, and it is thought that it will lead to the establishment of zinc reduction works in Mexico, for which concessions have already been solicited.

An effort is being made to find a market in Europe for zinc from this district, but up to the present time the railroad rate to Tampico has made European shipments unprofitable.

The British consul-general in the City of Mexico, commenting upon the exports of zinc to the United States, which, until August, 1909, averaged 190 carloads monthly, states that the shipments of this ore to the United States fell in September of the same year to 12 carloads, the ore now going chiefly to England and Germany.

Mr. D. B. MATTHEWS, a mining engineer of northern Mexico, believes, however, that there is a great future for the zinc industry of the Republic. The high tariff on zinc ores entering the United States naturally affected the industry in Mexico, and while there has been a temporary depression, it is hoped that within a very short time large quantities of zinc ore will be shipped abroad.

The price of zinc remains firm, and there are good reasons to believe that it will increase in value. The zinc smelters of the United States need the Mexican ores in order to operate their plants, it being impossible to obtain enough zinc ores for this purpose in the United States.

One of the most striking topographical features of Coahuila, Nuevo Leon, and Tamaulipas is the limestone existing in these States. These mountain masses, which rise above the table-lands in northern Coahuila and Nuevo Leon, extend a considerable distance into the States of Tamaulipas, San Luis Potosi, and Zacatecas, and in different sections of the country are more or less highly mineralized, producing lead, silver, zinc, and iron ores. Many of the old mines, which had been apparently exhausted by the crude methods of the early Spaniards, have been made to yield abundant ores, and further explorations, more modern methods, and increased facilities of transportation have given new life to the industry.

Formerly zinc was not mined to any great extent in this zone, but during recent years there has been a considerable production of this metal, notwithstanding the fact that zinc is not desired in ores that are to be smelted for lead. When it was learned, however, that the quantity of zinc in many ores was sufficient to give it value due to that fact alone, a new impetus was given to the zinc-mining industry. In the part of Mexico under consideration, prospecting has shown that the entire region contains valuable deposits of this metal in combination with lead and iron, and the mines now producing zinc have only recently been exploited for this metal.

Consul-General HANNA, in a report on the zinc industry in northern Mexico, says that the zinc contents of the ores range from 35 to 40 per cent, the poorest ores seldom assaying under 30 per cent and the best not over 45 per cent. Zinc ores are carefully selected in the mines, or are hand sorted on the dump before sacking and shipping. Some of the mines, which formerly forwarded zinc ores to the United States, now calcine them at the mine and ship to Europe, although the major portion of the raw ore still goes to the United States.

The region of northern Mexico which contains zinc ores in the greatest abundance is about 400 miles long by 200 miles broad. There being no zinc smelters in Mexico, the industry is largely affected by facilities of transportation and fluctuations of the metal market.

RAILWAY FROM MIRAFLORES TO SANTIAGO BAY.

A concession has been granted to ALBERT A. TRIPP for the construction and exploitation for a period of ninety-nine years of a railway from San Jose de Miraflores to a point on Santiago Bay on the Pacific coast in the State of Colima. The survey is to be commenced within six months from October 30, 1909, and the entire line, which is estimated to have a length of 28 kilometers, to be completed within a period of two years.

IRRIGATION IN THE NAZAS VALLEY.

The following report concerning a large irrigation project in Mexico is furnished by Consul CHARLES M. FREEMAN, of Durango:

The Nazas River rises in the northwestern corner of the State of Durango, flows south and east 225 miles, and is finally lost in the Laguna district, near Torreon, in the State of Coahuila. About 35 miles to the south of the source of the Nazas, and in the same range of mountains, the Sierra Madre, the Tepehuanes River takes its start. It flows in the same general direction as the Nazas for 60 miles and is then joined by the San Tixco, which rises 70 miles to the south. The Rio de la Palmas is formed by the junction of the Tepehuanes and the San Tixco, flows to the northeast for 50 miles, and empties into the Nazas. Tributary to these four rivers are numerous small streams. The territory drained by this system of rivers is over 20,000 square miles, or nearly one-half of the State.

At certain seasons of the year all these rivers are without water, but during the so-called rainy season the upper parts of the Nazas have an abundance of water for irrigation purposes. With excessive rainfalls in the mountains, the water, even in the lower parts of the river, goes to waste. When the rains are sufficient to overflow and inundate the land good crops are raised, but during dry years, when water is not available for irrigation, small crops result, with great financial loss accruing to the agriculturist and widespread want and suffering to the laborer and his family. At the present time the agricultural industries in the valley of the Nazas and in the Laguna district are wholly dependent upon the rainfall in the mountains of Durango. The water from this vast watershed, if conserved, would irrigate all the land capable of cultivation in the Nazas Valley and the Laguna district, land which is agriculturally as rich and productive as any in the world.

For a number of years there has been much controversy among landowners of this section as to water rights; they have never been able to get together and agree on any fixed basis whereby the water could be saved and used in an equitable manner. This controversy has led the Federal Government to intervene, and it has been decided to build a dam across the Nazas River, probably in the San Fernandez Canon, 40 miles above Torreon, in the State of Coahuila. It is estimated that this dam and the accompanying irrigation works will cost in the neighborhood of \$6,000,000 gold. Irrigation works of a kind have been established on the Nazas many years, consisting of canals simply, which tap the river and carry the water to lands having concessions for the use of the water. Of the irrigation works already established a careful account of the water has been kept. The amount used—that is, the amount drawn from the river through the canals—has averaged for the last ten years 274,773,500 cubic meters (1 cubic meter=35.36 cubic feet) per year, enough to irrigate about 70,000 acres, allowing 4,000 cubic meters to the acre.

With this dam built, and with the vast storage that will result, the entire valley will be assured of sufficient water to irrigate properly and to raise bumper crops each year, especially of cotton, the principal agricultural industry of the Laguna district. Other crops will naturally follow, as will the development of the territory in the vicinity of Torreon, Gomez-Palacio, and Lerdo into a flourishing agricultural condition and the cities themselves into ever-increasing industrial centers. At present, even with short crops five years out of six, this particular section of the Republic is one of the growing spots in population, in industries, and in wealth. With the irrigation works completed that will insure water to cultivate every acre, a still more rapid growth may be looked for, and a prosperity that would mean much not only to the people in this region, but to the exporters of the United States. Government engineers have been at work on the plans of the proposed works, the greatest ever attempted in Mexico, and which will rank among the great engineering works of the world.

As to the construction, the following has been learned which will be of interest to the exporters and manufacturers of the United States: (1) The cost of cement to be used is estimated at \$1,000,000 gold, and in this connection it is reported that a large cement factory is to be established at Torreon; (2) in addition to the dam and reservoir there will be constructed canals, 60 miles or more, to distribute the water to the canals and aqueducts already constructed; (3) that the Federal Government will insist upon a guarantee from the builders for the stability of the dam, the dikes, and canals, which will also cover leakage and escape of water other than from evaporation; (4) that contractors will give detailed reports at stated times,

probably monthly, describing the work accomplished; (5) that the Government will, from time to time, inspect the work, and may appoint engineers who will have the privilege of examining not only the work, but the books and other data of the contractors; (6) that in the canals alone the excavation will amount to 7,000,000 cubic meters (247,212,000 cubic feet).

It is estimated that the dam will form a reservoir capable of containing as much water and covering as great an area as any dam ever built. From the magnitude of the work an immense amount of machinery and tools will be needed—engines and boilers, tracks, dredges, drills, steam shovels, etc., in fact, everything used in such an undertaking.

DEVELOPMENT WORK IN TAMAULIPAS.

Preliminary work looking to the improvement and settlement of a vast tract of land lying in the lower Rio Grande and San Juan valleys is reported by United States Consul MILLER, at Matamoros.

A company owning some 2,000,000 acres in northern Tamaulipas, bordering on the Rio Grande and San Juan rivers, has received a subsidy of about \$6,000,000 gold from the Mexican Government to be used in the development of this tract and for the establishment of irrigation plants and the purchase of machinery. By the terms of its concession the company is bound, first, to irrigate a tract of 250,000 acres on the Rio Grande, and afterwards another tract of 350,000 acres on the San Juan, to furnish 30 inches of water yearly for each acre, and within the next five years to place 12,000 families on the land.

To solve the problem of settlers, a colonization company has been formed, which agrees to supply a given number of families each year from Europe, and families may even be brought from China and Japan to be placed on land that lies more than 60 miles from the American border. The immigrants will be permitted to settle in the tract without a cash payment and will be allowed to pay for the land out of profits made from it. The probable cost to such settlers will be about \$50 gold per acre, a price which is much lower than that now brought by land on the Texas side of the river.

A great many other projects are involved in this gigantic colonization scheme. Sugar mills, supply houses, and banks will be established, and factories and industries of all kinds will be encouraged. It is even proposed to build a short line of railroad through the property from El Soldadito to Colombres, a station on the Matamoros branch of the National Lines of Mexico. This company will also have a great deal to do with the building of a proposed line of railroad from San Antonio to Mexico City and Tampico.

The rich soil of the lower Rio Grande Valley will produce bountiful crops of cotton, corn, truck, grapes, figs, sugar cane, sorghum,

melons, pecans, dates, and citrus fruit. Silkworm culture could doubtless be successfully carried on in the region. In the territory tributary to it lies probably the greatest oil field in the world. On the land on which it may be impossible to place sufficient water for irrigation the cattle industry will continue to flourish. The development of this region, which is about to begin under such auspicious

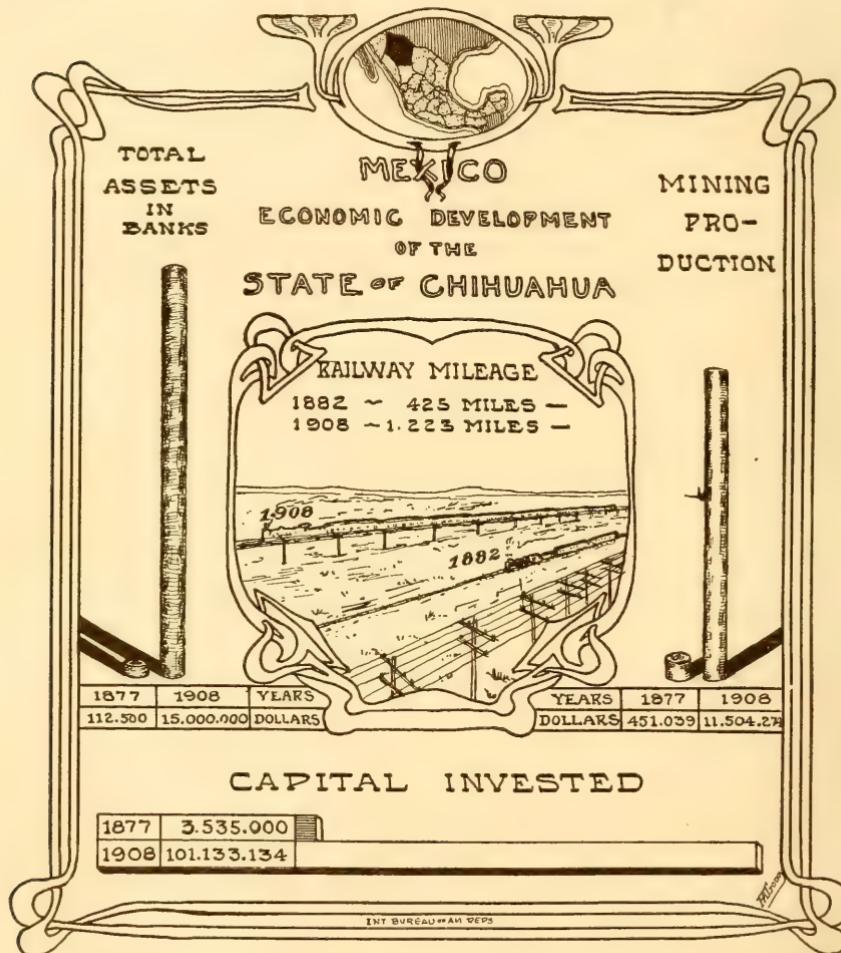


Diagram showing the economic development of the State of Chihuahua, Mexico, from 1877 to 1908.

circumstances and which the development of the Texas side had already proved to be practicable, means the opening of a large and profitable market to American manufacturers and merchants.

ECONOMIC DEVELOPMENT IN CHIHUAHUA.

During the visit to Chihuahua of President Díaz, after an absence of thirty years, a commemorative album was prepared by the au-

thorities showing the growth in wealth and importance of the State during those years, from which the following statistics are compiled:

The value of lands, business, industries, mines, banks, railways, etc., in the State of Chihuahua in 1877 and in 1908, in American currency were as follows:

Description.	1877.	1908.	Description.	1877.	1908.
Farm land.....	\$750,000	\$5,119,210	City bonds free from tax.....		\$1,000,000
City land.....	825,000	4,775,642	Industries free from tax.....		1,250,000
Movable property.....	212,500	2,033,000	Banks.....		6,000,000
Mercantile business.....	300,000	2,451,315	Railways.....		29,520,000
Industries.....	37,500	462,295	Total.....	\$3,535,000	101,133,134
Mining property.....	1,400,000	47,500,000			
Public buildings.....	10,000	1,021,672			

In 1882 there were 425 miles of railways in the State and in December, 1908, 1,223 miles. The volume of the present traffic on these railways can be estimated from the following statistics for the year 1906, the latest year for which such statistics are available: Passengers, \$601,339; freight, \$1,025,289.

The increase in the banking business is shown in the following comparison:

Description.	1879.	1908.
Capital.....	\$50,000	\$5,750,000
Bank notes issued.....	45,000	2,500,000
Deposits and commercial accounts.....	17,500	6,750,000
Total.....	112,500	15,000,000

Mining production increased from \$451,039 in 1877 to \$11,504,274 in 1908.

INCREASE OF BUSINESS OVER TEHUANTEPEC NATIONAL RAILWAY.

Business via the Tehuantepec National Railway, in which seven steamship lines now operating in the Pacific Ocean from Salina Cruz participate, is steadily growing and immense cargoes are being handled by all the lines referred to. The eastern traffic, or that from the Atlantic side, has also greatly increased since the completion of the railway, the amount of freight handled in 1908 aggregating 650,000 tons, and the traffic in 1909 will greatly exceed this amount.

Reports received by the Bureau of Statistics of the Department of Commerce and Labor of the United States show that the Tehuantepec Railway, which crosses the isthmus at Tehuantepec, in the southern part of Mexico, carrying the freights received from the steamship lines plying between the great ports of the United States and its eastern and western termini, carried in the first year of its operation (1907) between \$25,000,000 and \$30,000,000 worth of merchan-

dise; in the second year (1908) nearly \$38,000,000 worth; and in 1909 exceeded \$50,000,000 in the value of the freight carried by it.

The Panama Railroad, engaged chiefly in work in behalf of the Panama Canal, carried in 1907 about \$12,000,000 worth of merchandise originating in the United States and bound either for other parts of this country or for foreign countries, in 1908 about \$9,500,000 worth, and in 1909 will show about the same total.

Of the nearly \$52,000,000 worth of merchandise passing over the Tehuantepec line in the fiscal year 1909, over \$24,000,000 worth moved from the Pacific end, destined to ports on the eastern coast of the United States, and \$27,000,000 worth moved from the eastern end, destined for Pacific ports. Of the \$24,500,000 worth of merchandise received at the Pacific terminus of the Tehuantepec road, over \$18,000,000 worth was from Hawaii, being almost exclusively sugar for the refineries of Philadelphia and New York, while over \$5,000,000 worth originated on the Pacific coast, chiefly at San Francisco, being composed of miscellaneous merchandise. Of the \$27,000,000 worth passing westwardly over the Tehuantepec line, \$23,000,000 was sent to ports on the Pacific coast—San Francisco, San Diego, and Seattle—and \$3,000,000 worth to Hawaii.

More than \$60,000,000 worth of American merchandise was carried by rail across the isthmuses of Panama and Tehuantepec in the fiscal year 1909, and in the calendar year the total will probably reach \$75,000,000 in value. Of the two railway lines which now carry freights across the narrow neck of land connecting North and South America, that at the Isthmus of Panama is 40 miles in length, the other, at the Isthmus of Tehuantepec, 190 miles. The one at Panama, is largely devoted to work and traffic growing out of the construction of the Panama Canal; the other, at Tehuantepec, constructed chiefly with British capital and controlled in part at least by the Mexican Government, was built especially for the purpose of handling freights between the Atlantic and Pacific ports of the United States.

The United States consul at Victoria, British Columbia, states that arrangements have been perfected whereby freight may be brought to that port direct from New York via the Tehuantepec Railway and the Canadian Mexican Steamship Line from Salina Cruz to British Columbia. It is also stated that the steamer *Georgia*, of this line, has been loading at Salina Cruz for Victoria some cargo brought from New York under this arrangement. The freight is transported from New York to Puerto Mexico by steamships of the American-Hawaiian Line, where it is transferred to the Tehuantepec Railway and transshipped at Salina Cruz to the Canadian-Mexican steamers. An average of twenty-five days is required to bring freight from New York to Victoria in this way.

The Hamburger "*Beitrage*," commenting upon the competition that will probably ensue between the Tehuantepec National Railway and the Isthmian Canal, when the latter is completed and opened to exploitation, argues that the Tehuantepec line will retain the larger share of the west coast traffic, owing to its geographic location and facilities for handling freight, unless the Panama Canal should endeavor to secure this trade by offering abnormally low rates. It is further stated that, owing to the fact that the traffic through the Panama Canal will be carried on principally by lighters, it would doubtless be more advantageous for large ocean-going vessels to unload at the terminal ports and return to their home ports with a full cargo, rather than discharge part of their cargoes into lighters and pay the canal dues for the remainder.

There is no doubt that the Tehuantepec route is capable of great development, since the Gulf of Mexico is one of the most important business centers in the world, and Galveston and New Orleans, next to New York in relation to ocean traffic, are the principal ports of the United States. This enables Puerto Mexico, the terminal port of the Tehuantepec Railway on the Atlantic side, to enjoy extensive steamship connections with the Atlantic ports of the Old and New Worlds.

EXTENSION OF STREET RAILWAY SERVICE IN THE CAPITAL.

The street railways of Mexico City have been authorized to extend their lines through several of the streets of the capital, and to construct a line to Nonoalco in the Federal District, the work to be completed within a period of twelve months.

MODIFICATION OF THE STAMP LAW.

On October 28, 1909, the federal stamp law was modified so as to require the following stamps on commercial paper:

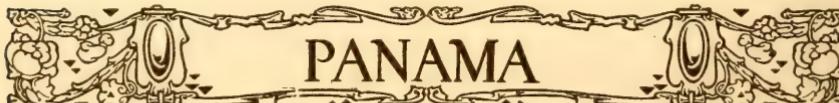
Bills of exchange:	Silver.
Up to \$100-----	\$0.02
Over \$100 and up to \$500-----	.05
Over \$500 and up to \$1,000-----	.10
Over \$1,000 and for each fraction thereof-----	.10
Checks and bills not exceeding thirty days' sight:	
Up to \$100-----	.02
Over \$100-----	.05
Time drafts, and notes exceeding thirty days' sight:	
For each \$20 or fraction thereof-----	.02



NICARAGUA

BUST OF GEN. MAXIMO JEREZ FOR THE INTERNATIONAL BUREAU OF AMERICAN REPUBLICS.

A bust of the Nicaraguan patriot, Gen. MAXIMO JEREZ, is to be placed in the Hall of Honor of the new building of the International Bureau of the American Republics in Washington. This magnificent edifice, which embodies some of the best features of Latin-American architecture, is rapidly nearing completion and will be ready for occupancy during the early part of 1910, and the fact that the bust of Gen. MAXIMO JEREZ, the distinguished Central American statesman, warrior, and patriot, who devoted his life so effectively to the defense of his country and who did so much for the cause of liberty and good government in the Republic, has engaged the attention of the press and awakened considerable interest in the work of this celebrated warrior-citizen of Nicaragua. The "*Diario de Granada*," commenting upon the honor shown General JEREZ, and through him to the Government and people of Nicaragua, publishes some interesting correspondence with the family of this prominent Nicaraguan patriot, relating to the securing of a good portrait of General JEREZ for reproduction, with comments on his life and deeds, in the press of the country, honoring in this manner the patriotism and civic virtues of one of Nicaragua's most distinguished sons, who exerted, both in peace and in war, a great and beneficial influence over the destinies of the nation.



PANAMA

THE MINING INDUSTRY.

The "Statistical Annual" of Panama for 1908, records gold mining properties to an extent of 229,830 hectares, for which 149 titles have been granted, and total mining properties covering 237,211 hectares. In the Province of Panama, 5 gold mines are located, and in Veraguas Province 4 are under exploitation.

Other mineral deposits with the number of titles granted include: Gold and silver mines, 3; gold and lead, 18; silver and copper, 2; silver and aluminum, 1; copper, 8; iron, 1; asbestos, 1; sulphur, 2; limestone, 1. The asbestos deposits cover an area of 400 hectares and the sulphur 2,000.

NEW TELEGRAPH SERVICE.

The Government of Panama has contracted with the Panama Railroad for the construction and maintenance of telegraph lines between the cities of Panama and Colon. The cost of the line, which is to be operated for the use of the Government and the public for the transmission of messages between Empire and Colon only, will be \$10,000. It is stipulated in the contract that messages from intermediate points must be sent over the Panama Railroad's line as has been the custom heretofore.

An agreement has been made with the United Fruit Company to establish wireless stations at Colon and Bocas. As there is a wireless station now at Port Limon, Costa Rica, the opening of the proposed station will complete an extensive system of wireless telegraphy in Panama and the neighboring Republics.



REPORT OF THE CENTRAL RAILWAY.

On November 4, 1909, the report for the year's operations of the Central Railway of Paraguay was made public, it being stated that the results of working had been in the main satisfactory.

Net receipts for the year are given as £32,416 which, though £3,163 less than in 1908, show an increase of more than £6,000 over 1907, which up to that time had been the most prosperous year for the enterprise. As compared with 1905, the net receipts for 1909 are more than double. The decrease for 1909, as compared with the previous year, is attributable to unusual currency fluctuations and disturbed political conditions.

After payment of interest on the debenture stock, net proceeds are reported of £19,246 which, added to the balance of £22,250 from 1908, shows a balance for disposal of £41,497.

Important changes are in process in the operation of the line, the principal item being the extension to Encarnacion, commenced in 1908, which is intended to link up the North-East Argentine and the Entre Rios lines, thus completing steel connection with Buenos Aires. The total length of this extension is 124 kilometers, of which more than one-third is already finished.

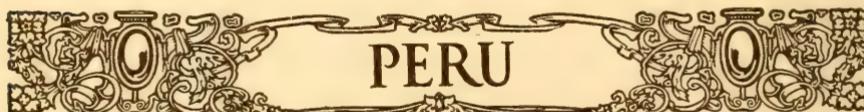
Abundant funds are at hand for the completion of the line and also to alter the gauge from 5 feet 6 inches to 4 feet 8½ inches so as to conform with that of the Argentine connection with Buenos Aires.

FREE ENTRY OF TELEPHONE MATERIAL AND SUPPLIES.

On August 3, 1909, the President of the Republic promulgated a law permitting the free importation of materials and supplies to be used exclusively for the conservation and extension of the National Telephone Company's lines, and exempting said company from the payment of federal and municipal taxes. The life of the concession is for ten years from the date of its promulgation. The business of the Federal Government and of the municipality of Asuncion, is entitled to a reduction of 20 per cent from the regular rates of the company.

CONSTRUCTION OF A TRAMWAY IN ASUNCION.

The Congress of Paraguay, under date of August 27, 1909, granted a concession to JORGE BARZI & Co. for the construction of a tramway, to be operated by animal or steam power, in the city of Asuncion. The concession is for a period of ten years, during which time the material and supplies imported for use in the construction, operation, and repair of the line are free of duties and of federal and municipal taxes.

**PERU-BOLIVIAN PROTOCOLS.**

On October 24 and 25, 1909, respectively, the Congresses of Peru and Bolivia, approved the protocols, signed in La Paz by the authorized representatives of the two Governments, terminating in this manner the boundary question between the two countries.

CHIMBOTE TO RECUAY RAILWAY.

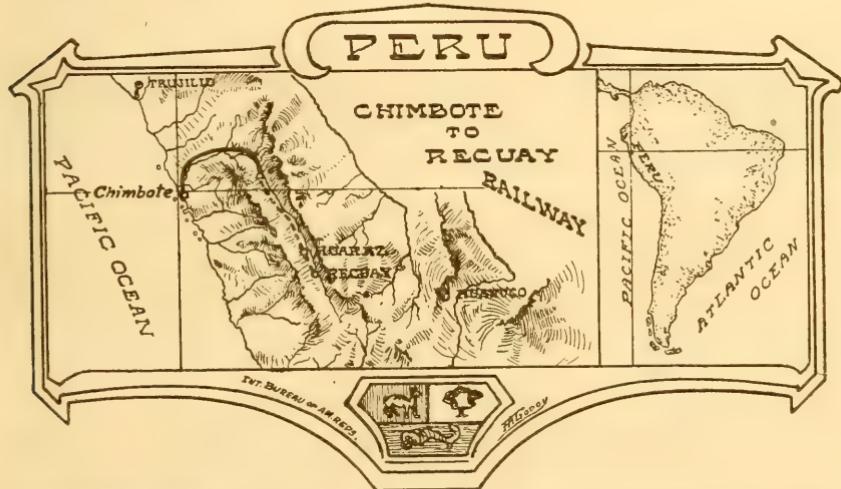
On November 5, 1909, President LEGUIA promulgated a law which provides that a sum sufficient to guarantee the payment for twenty years of 6 per cent on the capital invested in the construction of the Chimbote to Recuay railway, beginning with kilometer 105, shall be included in the annual budget, but in no case is the amount of the appropriation to exceed £35,000 in any one year. The part of the railway referred to in this law will be divided into three or more sections; and on the completion of one or more of the same, the appropriation will become available for the payment of the interest guarantee. The Government will not cede to the railway the public

lands lying on either side of the railway line, except to the extent necessary for stations, branches, and other legitimate uses.

PERUVIAN STEAMSHIP COMPANY.

A recent report of the board of directors of the Peruvian Steamship Company states that the dry dock, which reached Callao in perfect condition on April 8, 1909, has been placed in position and is now in active use. A plan is under way which contemplates the changing of the anchoring ground of the dock, and a flood gate has been ordered from Europe to avoid the action of the tides before effecting a change.

Two rapid vessels, the *Huallaga*, and the *Ucayali*, capable of navigating 18 and $19\frac{1}{4}$ knots per hour, respectively, have been constructed, the former having been delivered in August and the latter in October, 1909.



Map showing the location of the railway from Chimbote to Recuay, Peru, for which the President of that Republic has recently promulgated a law guaranteeing the payment of interest for twenty years at 6 per cent on the capital invested.

Three new vessels have been ordered in Europe at a cost of £261,000, the funds for the payment of which were obtained by the issuance of 6 per cent interest-bearing bonds at 90 $\frac{1}{2}$. These vessels are to be delivered in fourteen, sixteen, and eighteen months, respectively.

PRIZES OBTAINED AT THE QUITO EXPOSITION.

The exhibitors of Peru at the Quito Exposition, and the persons connected therewith, were awarded 3 grand special prices and 102 awards of a lower grade, consisting of gold and silver medals and diplomas. The principal prizes were given to exhibitors representing the textile, liquor, cigar, furniture, and other industries, and to exhibits of agricultural and mineral products of Peru.

COMMERCIAL INSTRUCTION IN GUADALUPE COLLEGE.

ALBERT A. GIESECKE, B. S., Ph. D., a North American professor, has been employed by the Peruvian Government to organize the course in commercial education at Guadalupe College, Lima, the oldest institution of learning in the Republic. Mr. GIESECKE is eminently fitted for the work to which he has been called, having taught in the High Schools of Pennsylvania, Cornell University, and the University of Pennsylvania. He graduated from the University of Pennsylvania, and took postgraduate courses in finance and political science in the Universities of Berlin and Paris. Peru is a promising field for this class of instruction, and the opportunities for native young men properly trained in the commercial branches are very great. The establishment of an extensive course of training of this order in the leading university of the country meets a long-felt want.



EXPORTS, FIRST HALF OF 1909.

Official figures published by the Government of Salvador record total export valuations from the Republic through Acajutla during the first six months of 1909 as C. 7,205,476.51, equivalent to \$2,882,190 United States gold.

The six leading items shipped abroad and their respective valuations were: Coffee, \$2,654,028; sugar, \$72,896; balsam, \$56,298; indigo, \$42,000; hides and horns, \$19,191; and tobacco, \$15,866.

Shipments from the port indicate that France ranks first as a receiver of Salvadoran exports, taking products to the value of \$749,946, mainly coffee; Germany is second, with \$667,304, coffee and balsam covering practically the total; the United States is third with \$506,064, in which coffee figures for \$480,453, and balsam, \$18,558; Italy is fourth, with \$352,122, followed by Austria, \$281,961, and Spain, \$83,031.

The exports through the port of La Libertad during the same period amounted to C. 2,233,954.35 (\$893,581.74), and consisted principally of coffee, balsam, indigo, sugar, hides, rubber, and tobacco. The exports of coffee were valued at C. 2,186,495.80 (\$874,598.32), of which France took \$311,093, Germany \$166,676, United States \$124,740, and Great Britain \$106,043, the balance going to Italy, Norway, Panama, and Sweden. France occupied the first place, having received exports valued at \$312,728.96; Germany the

second place, \$169,736.84; United States the third place, \$130,657.67, and England the fourth place, \$111,312.66. The other countries participating in this trade in the order of their importance were Italy, Norway, Austria, Sweden, Panama, and Costa Rica, all the exports of tobacco having been shipped to the latter country.

NATIONAL SOCIETY OF AGRICULTURE.

The by-laws of the National Society of Agriculture, published in a recent issue of the "*Diario Oficial*," and which have been submitted to the President of the Republic for approval for the purpose of

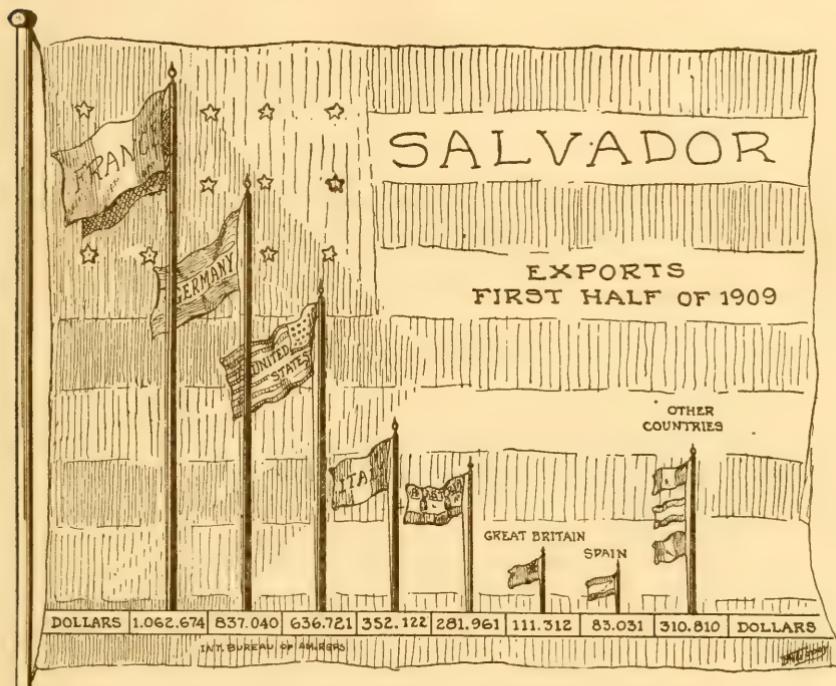


Diagram showing the exports for the first half of the year 1909 of the Republic of Salvador to various countries.

giving the society the status of a legal entity, state that the object of the society is to develop agriculture, stock raising, and kindred industries by the introduction of improved methods of cultivation, the use of selected seeds and stock for breeding purposes, and the encouragement of the education of young agriculturists in the National Agricultural School of the Republic. Means will be provided for finishing the education of a certain number of young men in the agricultural colleges of foreign countries in order that they may use the knowledge acquired abroad for the benefit of their country. The society will also promote the founding of agricultural and savings banks, and the establishment of cooperative societies.



URUGUAY

CUSTOMS REVENUES, FIRST NINE MONTHS OF 1909.

Uruguayan customs receipts for the first nine months of 1909 aggregated \$10,671,961, an advance of \$216,852 over the high record of the corresponding period of the preceding year.

PASTORAL EXPORTS IN 1909.

The exports of hides, tallow, sheepskins, and hair from Uruguay during the produce year ending September 30, 1909, were as follows: Ovhides, 2,205,166; horsehides, 32,725; tallow, 20,491 pipes and hogsheads; sheepskins, 18,121 bales; and hair, 1,218 bales. In the fiscal year 1907-8 the exports of ovhides were 1,717,536; horsehides, 21,724; tallow, 23,530 pipes and hogsheads; sheepskins, 13,715 bales; and hair, 1,195 bales. In 1909 the United States received 904,413 ovhides; Belgium, 415,056; and Germany, 409,109. All of the horsehides, tallow, and sheepskins went to Europe. The United States received 508 bales of hair, Italy 273, and France 208.

FREE ENTRY OF MACHINERY FOR THE HEMP INDUSTRY.

On June 5, 1908, an executive decree was issued providing for the free entry into the Republic of Uruguay of machinery to be used in the extraction of hemp fiber, the spinning of the same, and the manufacture of hemp fabrics. This decree was modified on October 15, 1909, so as to require before the importation of such machinery, apparatus, or parts thereof, the filing of a petition with the Department of Industry, Labor and Public Instruction, giving a detailed description of the articles to be imported, and stating the place where they are to be used. This petition, or request, will be considered by the department, and if granted the Bureau of Customs will be notified, in order that the machinery may be imported without the payment of duty.

ELECTRIC INSTALLATIONS IN MONTEVIDEO.

The company operating the electric-light installation of Montevideo recently made noteworthy improvements and extensions, the inauguration of which was made an important public function, in which President WILLIMAN and his cabinet officials, as well as prominent men in public and private life, participated.

The lighting system of the capital now includes for city and suburbs 60 kilometers of primary and 110 kilometers of secondary underground cables, making, with the other distributing lines, a total

extension of 500 kilometers. The number of arc lights are 1,100 and of incandescent lights 6,100. The number of subscribers is now 7,129, against 3,612 two years previously, with 112,176 lamps compared with 52,979 in 1907.

TRADE INCREASE WITH ITALY.

The great increase to be noted in the commerce of Italy with River Plate countries is due largely to the establishment of rapid steamer communication, in the opinion of Minister E. C. O'BRIEN, of Montevideo. While statistics of the total importations into Uruguay from

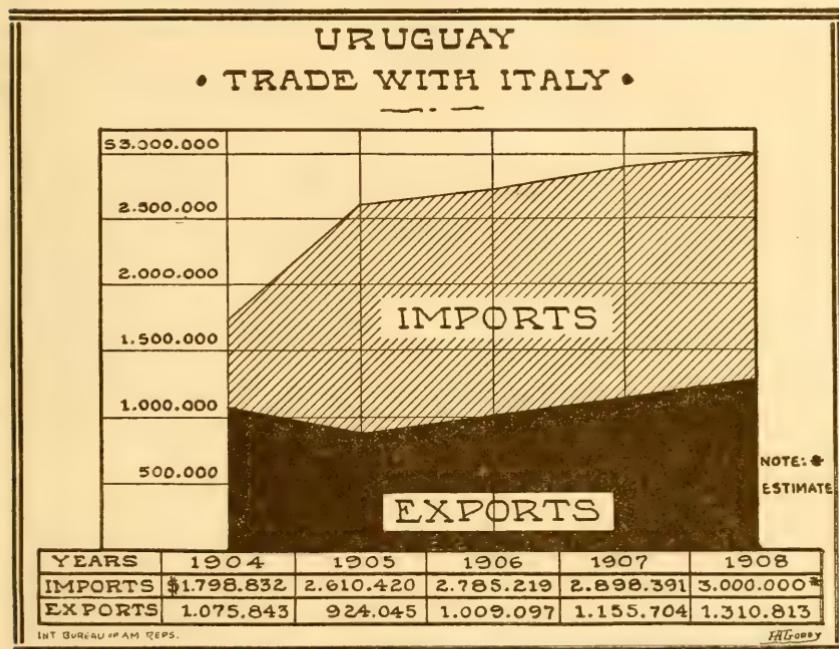


Diagram showing the export and import trade of the Republic of Uruguay with Italy from 1904 to 1908.

Italy during 1908 are not yet available, he states they are estimated at over \$3,000,000. The shipments to Italian ports in 1908 were valued at \$1,310,813. The trade between Uruguay and Italy in earlier years was: 1904, imports from Italy \$1,798,832, exports to Italy \$1,075,843; 1905, imports \$2,610,420, exports \$924,045; 1906, imports \$2,785,219, exports \$1,009,097; 1907, imports \$2,898,391, exports \$1,155,704. These figures show a steady gain each year, with the exception of the exports of 1905, when there was a decrease of \$151,798 in comparison with the preceding year.



VENEZUELA

EXPORTS FROM LA GUAIRA, NINE MONTHS OF 1909.

United States Consul ISAAC A. MANNING reports the following shipments from La Guaira, Venezuela, during the nine months ending September 30, 1909, as compared with a similar period in 1908: Coffee, 129,276 sacks, an increase of 28,213 sacks; cacao, 134,543 sacks, an increase of 49,289 sacks; hides, 929,613 pounds, an increase of 124,909 pounds. The bulk of the coffee went to Germany and the bulk of the cacao to France. Of the coffee and cacao exports $2\frac{1}{2}$ and 18 per cent went to the United States, an increase of $2\frac{1}{2}$ and $8\frac{1}{2}$ per cent, respectively. Of the hides exported nearly 90 per cent went to the United States, the balance going to Europe.

INVOICE REGULATIONS.

Writing from La Guaira under date of September 27, the Consul of the United States comments upon the customs laws of Venezuela, particularly as they affect the shipping of dry goods to that country. He states that for satisfactory results in exportation to Venezuela it is necessary that exporters should be acquainted with the customs act of Venezuela; each exporter should know at least so much thereof as may affect the line he desires to sell. The main points to remember are:

That every article must be properly and explicitly described in the invoice.

That if the article is known by various names in different countries, the exporter should satisfy himself as to its Venezuelan nomenclature.

That if an article is called by a name specifying goods of a class lower than the Venezuelan classification, the article is liable to confiscation as contraband.

If misnamed, and because of this misbrand or misnaming the article is placed in a class higher than its proper classification, the importer will have to pay the duty of the higher class.

If the name given in the invoice is not specific, the importer will pay a fine equal to double the duty thereon. Thus, "wine" is not considered a sufficiently specific designation of "white wine in bottles of 1 quart each."

That articles of two different classifications should not be packed in the same case, for when so done all the contents of the case will pay the rate of duty levied on the article therein of the highest classification.

Each shipment must be accompanied by a consular invoice. This invoice must be presented to the consular officer for Venezuela for the port of shipment in triplicate and in the Spanish language.

PRODUCTS OF THE NATIONAL CEMENT FACTORY.

Tests of resistance to traction of Roman cement manufactured in the national cement factory at Caracas showed the following results as reported by the United States Consul at La Guaira:

On June 28, in the presence of Dr. ROBERT VARGAS, Minister of Public Works, and of various prominent engineers and scientists of Caracas, four bricks of pure cement were tested. The first broke at pressure of 57 kilograms, the second at 59.5, the third at 58, and the fourth at 63.5, the average resistance being 59.5 kilograms at the end of twenty-eight days per square centimeter (0.155 square inch), German standard.

At the same time there were tested three briquettes made in the proportion of 1 of cement to 3 of normal sand, with the following result: First brick broke at pressure of 32 kilograms, the second at 35, the third at 31.5, the average resistance being 32.8 kilograms at twenty-eight days.

Various bricks made July 6 were tested on the 26th, resulting in average resistance for those of pure cement of 58.5 kilograms, and those made of 1 of cement to 3 of sand showing a resistance of 33.5 kilograms. Finally a brick made of pure cement, after standing six days, broke at a pressure of 34.5 kilograms.

On August 4, 1909, six briquettes made on July 6, three of pure cement and three of compound 1 to 3, gave the following result (resistance per square centimeter): Pure cement: First brick at 53 kilograms, second at 60, third at 53; average, 55.34 kilograms. Compound: First at 29.5 kilograms, second at 30, third at 34.5; average, 31.33 kilograms.

THE MINING INDUSTRY.

In connection with the new mining law of Venezuela, promulgated in August, 1909, the Consul of the United States at La Guaira states that there is a growing field for American commerce in the southeastern part of Venezuela, in the Guiana country, as well as a chance for pioneering in an almost undeveloped territory. Here is the region of greatest mineral wealth in Venezuela, as it is also the source of the great rubber and gum supply.

The rich Imitaca iron mines, extensive placer gold deposits, the diamond mines of Roraima, as well as silver, copper, and other metals, are found in this region. The only drawback to the immediate development of this district is found in the many old concessions, which

have led to certain monopolization of territory and rights to labor, etc., but it is now thought the Government of Venezuela will not continue to look with favor on these conditions, which have greatly retarded the settlement and practical growth of the country.

TARIFF MODIFICATIONS.

A Venezuelan decree, dated October 9, 1909, provides for the abrogation of the decrees of May 31, June 19, and July 17, which allowed the free admission of various chemicals and apparatus for sanitary and disinfecting purposes. This decree does not apply to Yersin serum and Haffkine lymph, which are still to be admitted free of duty.

The decree of May 31 provided for the free admission of the following articles: Disinfecting apparatus of formol, sulphur, sublimate, and lysol, and the following antiseptics: Sulphate of iron and of copper, formol, sulphur, sublimate, carbolic acid, hypochloride of lime, crisodol of sodium, creoline, chloride of lime, Yersin serum, and Haffkine lymph.

By the decree of June 19 the following articles were to be admitted free of duty: Traps and apparatus for catching rats and mice; sanitary water-closets, urinals, and inodorous sewers; arsenic, ratitis (a microbic or bacteriological preparation for germination of a contagious infection among rats and mice), and insect powders.

The decree of July 17 exempted from payment of duties chloro naphtholeum and hyco, formaldehyde regenerators, and machines for exterminating insects.

The Venezuelan Government has also classified the following articles for customs purposes:

“Fluxite,” a preparation of muriatic acid with fatty substances, forming a paste, and used in soldering as a substitute for sal ammoniac, under class 4, pays a duty of 0.75 *bolivar* (1 *bolivar*=\$0.193) per kilogram (2.2046 pounds) plus 55 per cent surtax.

“Chloro naphtholeum,” a liquid preparation for the destruction of ticks and other parasites on animals of the field, when imported for this purpose, as belonging to the second class, pays a duty of 0.10 *bolivar* per kilogram plus 55 per cent surtax.



INTERNATIONAL BUREAU OF AMERICAN REPUBLICS

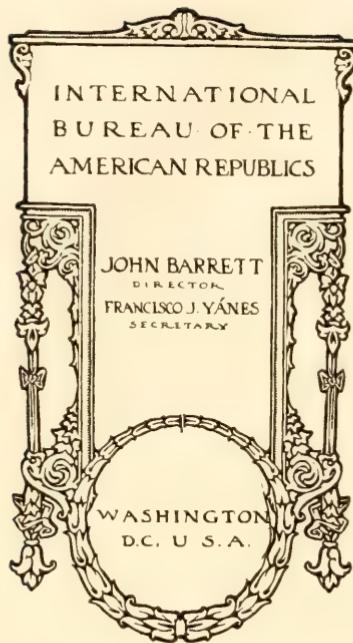
BULLETIN
OF THE INTERNATIONAL BUREAU OF THE
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FEBRUARY

1910



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Double number (Bulletin in English, Spanish, Portuguese, and French), \$3 per year in all countries of the International Union; in other countries, \$4. Single number, 40 cents.



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NORTH AMERICA.

Plaster model of one of the two marble statues of heroic proportions which are to ornament the façade of the new building of the International Bureau of American Republics in Washington. This is the work of Mr. Gutzon Borglum, and expresses the sculptor's idea of the spirit animating the northern half of the Western Hemisphere. The figure, an Anglo-Saxon woman, symbolizing the mother nature that keeps an aggressive but judicious race together, has been made to represent the northern people. Her energy and restraint are typified as in her right hand she calmly holds the torch of enlightenment, while with her left she controls her own restless spirit of enterprise. About her feet are grouped the implements and the results of her activities in the liberal arts.

BULLETIN

OF THE INTERNATIONAL BUREAU

OF THE AMERICAN REPUBLICS



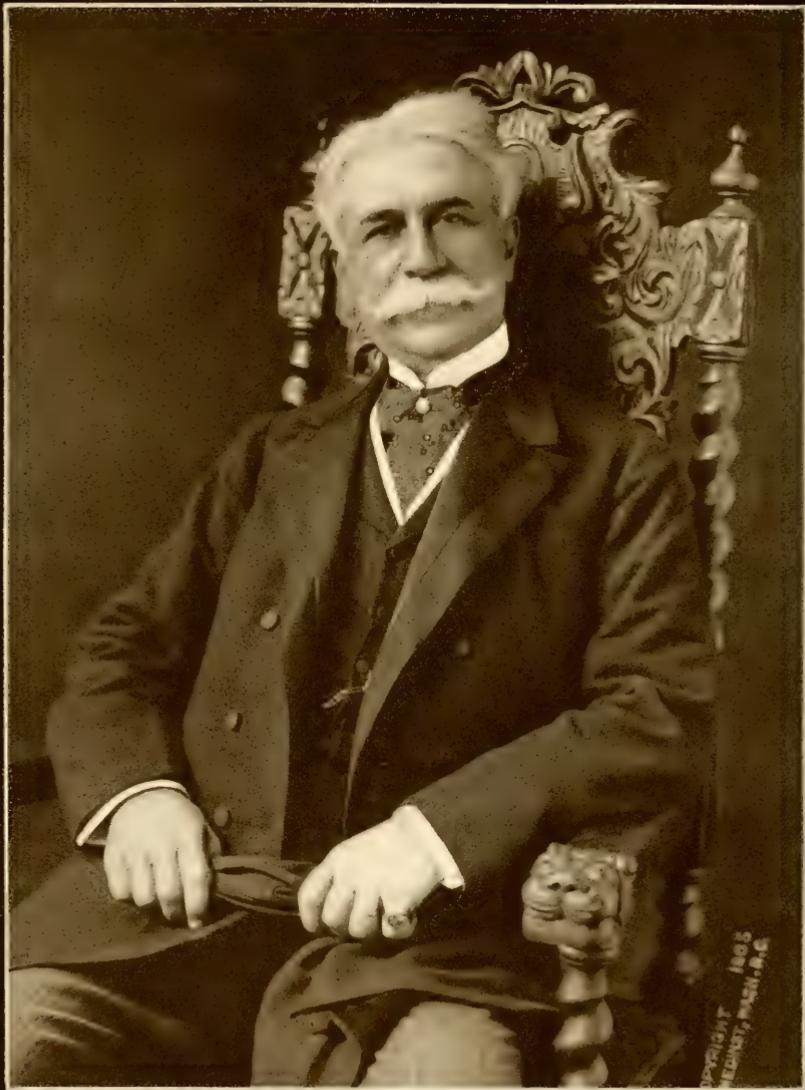
VOL. XXX.

FEBRUARY, 1910.

NO. 2

THE cause of Pan-Americanism and the International Bureau of the American Republics have lost a most distinguished and earnest advocate and a sincere friend in the death, on January 17, 1910, of Mr. JOAQUIM NABUCO, the Brazilian Ambassador. Along with ELIHU ROOT he had labored with all the strength of his great statesmanship and his brilliant mental attainments to develop the spirit of comity, good will, and solidarity among the American nations. Mr. NABUCO was undoubtedly one of the most profound scholars that has ever represented a Latin-American country in foreign lands. He had an exceptional knowledge of international law and affairs. He was the master of many different languages, and was a brilliant writer upon a great variety of subjects ranging from law to poetry. His influence in making Brazil and all Latin America well and favorably known throughout the United States was shown by the great number of invitations which he received from universities and commercial and literary organizations to deliver addresses before them. The Universities of Yale, Columbia, and Wisconsin conferred special degrees upon him in recognition of his attainments in diplomacy and scholarship. The esteem in which he was held by all of his colleagues and by those who came in contact with him was equaled by the deep love and affection felt for him by all of his personal friends. His name will go down in history as one of the notable men of Pan-American progress and relationship, and he will always be known as one of the foremost statesmen of Brazil and Latin America.

The Secretary of State of the United States and Chairman of the Governing Board of the International Bureau of American Republics, immediately after the death of the Ambassador, called a special meeting of the Governing Board to be held in the State Department at 10 o'clock on the morning of January 18, 1910, to adopt resolutions concerning the death of Mr. NABUCO. This meeting was attended by the following members of the Governing Board:



Photograph by Clinedinst, Washington, D. C.

SENROR JOAQUIM NABUCO,

The late Ambassador Extraordinary and Plenipotentiary of Brazil, who died in Washington, D. C.,
January 17, 1910.

Secretary of State of the United States, the Ambassador of Mexico, the Minister of Costa Rica, the Minister of Bolivia, the Minister of the Argentine Republic, the Minister of Ecuador, the Minister of Uruguay, the Minister of Guatemala, the Minister of Salvador, the Minister of Chile, the Minister of Honduras, the Minister of Panama, the Minister of Haiti, the Minister of Cuba, the Minister of Venezuela, the Minister of the Dominican Republic, the Chargé d'Affaires of Peru, Director JOHN BARRATT, and Secretary YÁNES, of the International Bureau.

In calling the meeting to order the chairman, Secretary KNOX, made the following brief address:

This is a sad occasion for the Governing Board of the International Bureau of American Republics. We meet to contribute to the universal expression of grief our own sincere and personal tribute of sorrow and affection invoked by the death of the Brazilian Ambassador, Mr. JOAQUIM NABUCO. A noble man has fallen in the midst of the scenes of his greatest usefulness. The world mourns the death of a high-minded, just, and liberal statesman, and we can without reserve proclaim the loss of a coadjutor of singular and conspicuous influence in the advancement of the high purposes of this Bureau. All America has lost a wise and generous friend; all of us a delightful and helpful associate.

At the close of his remarks, brief tributes to the memory of the Ambassador were made by the Ambassador of Mexico, the Ministers of Chile, the Argentine Republic, and Uruguay. Following these remarks the following resolution was unanimously adopted:

The Governing Board of the International Bureau of the American Republics having heard with profound regret of the death of the distinguished Ambassador from Brazil, the eminent statesman, Mr. JOAQUIM NABUCO, hereby

Resolves, That this expression of the deep sorrow of each and every one of the members of the Board be spread upon the minutes of this meeting.

And further resolves, That the Board send a cablegram expressing their condolence to the Brazilian Government on this painful occasion, and, furthermore, that a certified copy of this resolution be sent to the widow of the illustrious diplomat, as an expression of sympathy in her bereavement.

The funeral obsequies for Mr. NABUCO took place on January 20. They consisted of a solemn high mass of requiem, intoned in the presence of Archbishop FALCONIO and other eminent prelates, and held in St. Matthew's Church. The President of the United States and Mrs. TAFT, the Diplomatic Corps, the members of the Cabinet, members of the United States Supreme Court, and the most distinguished representatives of American legislative, official, and civilian life attended.

A great number of floral offerings placed at one side of the altar testified to the affection and esteem in which the dead man was held. Among the many beautiful floral tributes were noticed wreaths sent by President and Mrs. TAFT, the Secretary of State and Mrs. KNOX, the Secretary of the Navy and Mrs. MEYER, the President of Brazil, the Secretary of State of Brazil, the Governing Board of the International Bureau of the American Republics, the International Bureau of the American Republics, the Republic of Chile, the Portuguese Legation, the Diplomatic

Corps, the Republic of Mexico, the Republic of Venezuela, Señor QUESADA, former Minister from Cuba to the United States, and a great number of others from personal friends of the late Ambassador.

The requiem was solemnized by the Rev. Dr. JOHN MONTGOMERY COOPER, with the Rev. Father KNELL, C. S. S. R., of St. Mary's Church, Annapolis, as deacon, and the Rev. EDWARD L. BUCKEY, of St. Matthew's Church as subdeacon. The Rev. Dr. GEORGE A. DOUGHERTY, of the Catholic University, acted as master of ceremonies.

The Apostolic Delegate, Archbishop FALCONIO, presided in cappa magna, being attended by Right Rev. Mgr. BONAVENTURE CERRETTI and the Rev. Dr. LEO McGINLEY, Secretary of the Papal Delegation, as deacons of honor. The following prelates also served within the sanctuary: Right Rev. Mgr. THOMAS S. LEE, pastor of St. Matthew's Church; the Rev. JOHN REDING, of Northampton, Massachusetts; the Rev. Father POWERS, of Boston, Massachusetts; the Rev. HENRY J. SHANDELLE, S. J., of Georgetown University, and the Rev. THOMAS E. McGUIGAN, of St. Patrick's Church.

The Secretary of War ordered the military escort due an officer of the rank of lieutenant-general to attend the service. This escort consisted of the First squadron, Fifteenth United States Cavalry; Battery A, Third Field Artillery, United States Army, and one battalion of the United States Engineer Corps, and the usual complement of troops of the line, headed by the Marine Band, the whole force being under Colonel GARRARD.

The casket was conveyed to the church on an artillery caisson draped with the Brazilian colors, and the honorary pallbearers were the Secretary of State, Hon. PHILANDER C. KNOX; His Excellency the Italian Ambassador, Baron EDMONDO MAYOR DES PLANCHES; His Excellency the Austro-Hungarian Ambassador, Baron HENGELMÜLLER VON HENGERVÁR; His Excellency the French Ambassador, Mr. J. J. JUSSERAND; His Excellency the Portuguese Minister, Viscount DE ALTE; His Excellency the Chilean Minister, Señor DON ANIBAL CRUZ; Senator ELIHU ROOT; Senator SHELBY M. CULLOM; Justice OLIVER WENDELL HOLMES; Representative JAMES B. PERKINS; Rear-Admiral WINFIELD S. SCHLEY; and the Director of the International Bureau of the American Republics, Mr. JOHN BARRETT.

The body was conveyed to Oak Hill Cemetery and there placed in a chapel, where it will remain before being sent to Rio de Janeiro on the cruiser *Montana*, which the Secretary of the Navy has designated as the ship to convey the remains to Brazil. President TAFT offered the services of the gunboat *Mayflower* to Madame NABUCO to convey her and her family to Rio de Janeiro, which she declined, as it was her intention to precede the body to Brazil on a commercial line.

The numerous attendance in St. Matthew's Church was an eloquent testimony of the high esteem in which the late Ambassador was held in this country.

Photograph by Harris-Ewing, Washington, D. C.

FLORAL TRIBUTES SURROUNDING THE CASKET CONTAINING THE REMAINS OF SENIOR JOAQUIM SABUCO, THE LATE BRAZILIAN AMBASSADOR, IN THE CHAPEL OF OAK HILL CEMETERY, WASHINGTON, DISTRICT OF COLUMBIA, JANUARY 20, 1910.



CHANGES IN THE BULLETIN.

The expressions of appreciation of the appearance and contents of the New Year's, or January, issue of the BULLETIN which have come from members of the Governing Board and from Senators and Congressmen and others interested in the work of this institution are most encouraging to the Director and his assistants in their efforts to make the BULLETIN not only a practical and dignified but an attractive and pleasing agency for educating and informing the world in regard to the progress, commerce, and development of the American republics. An excellent illustration of the advantage to be derived from an artistic cover, followed by good reading matter, is found in what happened in one of the leading clubs of Washington. The January number of the BULLETIN was placed on the table where were also all of the principal magazines published in the United States and in Europe. In the course of two days the issue of the BULLETIN was handled and read so constantly that it looked actually soiled in comparison with the other magazines, and it was necessary that a new copy be supplied. The attendant in charge of the room said that it had been picked up and looked at more carefully than any of the so-called popular publications. Formerly, when the BULLETIN had the appearance of a plain public document and was filled only with statistical data, without illustrations, and arranged without particular regard to the convenience of the average reader, it not only was not in demand by clubs, libraries, and reading rooms, but when once placed upon a shelf remained there until it was moved for the purpose of shaking off the dust. The BULLETIN of former days contained much excellent matter, but it did not perform the great educational work in regard to our sister republics, which it should have accomplished, simply because it did not have a pleasing dress. Within twenty-four hours after the January issue had been distributed from the office of the Bureau, scores of notes and telephone messages arrived expressing appreciation of its appearance and quality and asking for extra copies. The Director, however, wishes it distinctly understood that he realizes that the BULLETIN has yet many shortcomings which must be supplied. There are also numerous improvements that can be introduced, but which can not be done all at once. The limitations and difficulties which surround the preparation and publication of anything which is not controlled by private enterprise are a serious handicap. While the Director thanks the friends of the BULLETIN for their praise, he invokes also the patience of its critics.

THE UNITED STATES MINISTER TO URUGUAY AND PARAGUAY.

Hon. EDWIN VERNON MORGAN, Envoy Extraordinary and Minister Plenipotentiary from the United States of America to Uruguay and Paraguay, was born in Aurora, New York. He attended Harvard University, taking the degree of A. B. in 1890 and of A. M. in 1891, and was

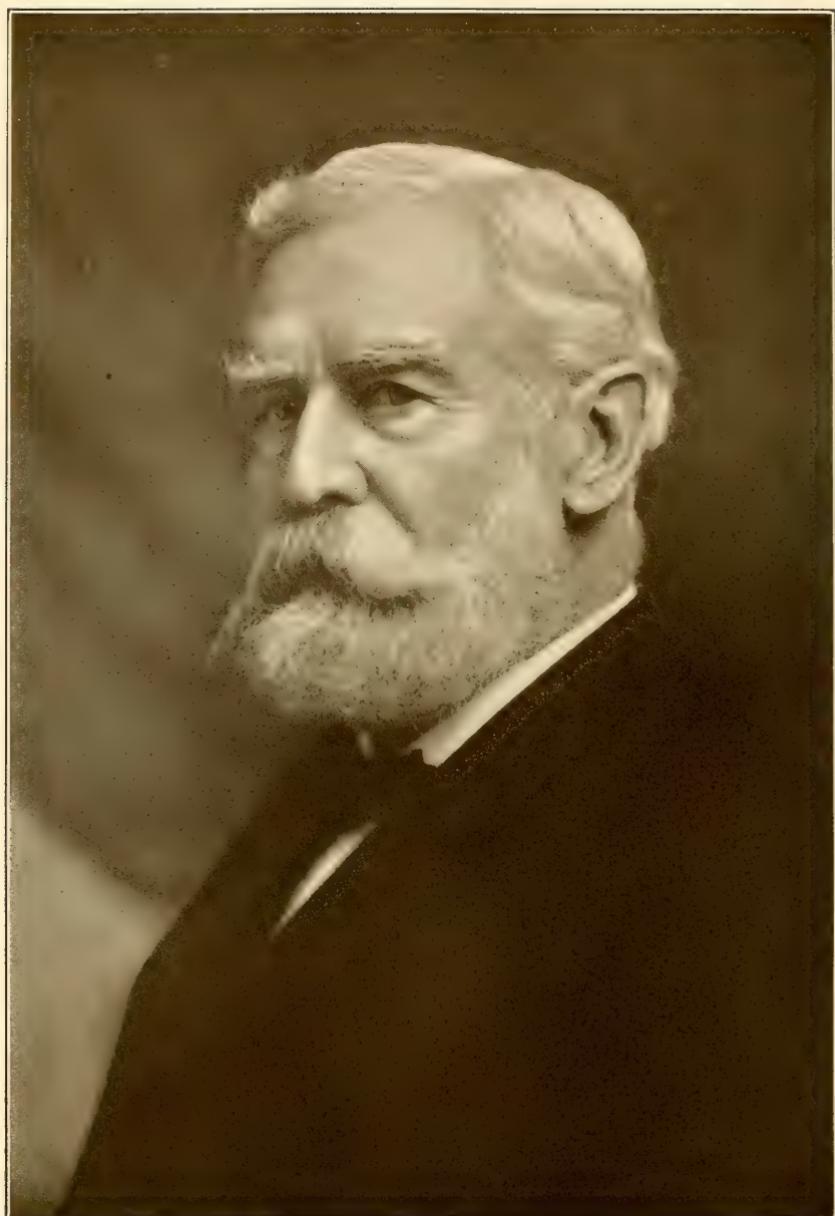


HONORABLE EDWIN V. MORGAN,
Envoy Extraordinary and Minister Plenipotentiary of the United States of America to Uruguay
and Paraguay.

later a student at the University of Berlin, Germany. He was made assistant professor of history at Harvard in 1892, and from 1895 to 1898 was instructor of history in Adelbert College, Cleveland, Ohio. Mr. MORGAN was secretary to the Samoan High Commission in 1899, and the year following began his diplomatic career as Secretary of Legation at Seoul, Korea, being successively appointed Vice and Deputy Consul-General at Seoul, Second Secretary of Embassy at St. Petersburg, confidential clerk to Third Assistant Secretary of State, Washington, D. C.; Consul at Dalny, Manchuria; Envoy Extraordinary and Minister Plenipotentiary to Korea, and since November 29, 1905, has occupied the post of Minister to Cuba. He is a Chevalier of the Légion d'Honneur (France) and a member of the Metropolitan Club of Washington, D. C.

DEATH OF COL. GEORGE EARL CHURCH.

Col. GEORGE EARL CHURCH, whose demise in London on January 5, 1910, has been announced, was foremost among the captains of industry who, though a citizen of the United States, devoted much energy toward the development of Latin America. Born in 1835, he selected engineering as a profession on the completion of his scholastic career, and at 22 years of age went to the Argentine Republic where he served as member of a scientific commission to explore the southwestern frontier of the country. In 1860 he surveyed and located the Great Northwestern Railway of Buenos Aires, continuing in its construction and the practice of his profession until the civil war broke out in the United States. He rendered valuable service under arms, and at the close of the war proceeded on an important mission to Mexico on behalf of the United States Government. So highly esteemed was he by the Mexican authorities that upon the establishment of the Juarez Government he was offered a grant of a large tract in the State of Coahuila. His most renowned enterprise was, however, in connection with the inception of the Madeira-Mamoré Railway, on which, for ten years, at the invitation of Bolivia, he expended the great resources of his intelligence. The story of his negotiations with European capitalists and with the Brazilian Government; his combats not only with nature in the jungle but with the prejudices of men, makes an interesting prelude to the history of the great railway which is now under construction in the Madeira and Mamore region and is a tribute to his foresight and technical capacity. Later services in Latin America took him to Ecuador, but in after years he took up his residence in London and associated himself with Argentine railway companies and engaged in literary pursuits, devoting much time to the study of South American aborigines. As a writer and speaker on subjects connected with his life works he was a recognized authority, and his contributions to the researches of scientific societies are standards for the student. A member of many societies both at home and abroad, his loyal Americanism was always a prominent element in his character.



COLONEL GEORGE EARL CHURCH,
The eminent American captain of industry, who died in London, January 5, 1910

AN INTERESTING OPINION FROM SANTIAGO, CHILE.

From time to time the BULLETIN has quoted from editorials in the papers of the United States their appreciation of the work of the Bureau and of the interest of the BULLETIN. It is a pleasure in this issue to quote from "*El Diario*," one of the principal newspapers of Santiago, the capital of Chile. In its issue of November 13 it said:

The task undertaken by the International Bureau of the American Republics is a big as well as a laborious one. The institution is at present under the direction of Mr. JOHN BARRETT, whose name is well known to all students of affairs in the southern republics. To develop closer relations, to diffuse a better mutual knowledge among all the countries of the continent, to prepare slowly but surely for the great future of America, to make this *rapprochement* practical, and to unite the republics in a double bond of confidence and support—such, in short, is the task of this International Bureau which, under favorable auspices, is carrying into practical application an idea of transcendent importance. In order to appreciate the character of this gigantic enterprise, it is sufficient to run over the pages of the BULLETIN published each month, and which each month is more interesting and suggestive. We have recently received the issue for September and have read it with the same enthusiasm as the preceding numbers for the current year. In it are embraced fully the essentially Americanist principles of the International Bureau at Washington. In it is collected information of the greatest value concerning each country, covering commercial transactions, agricultural and industrial development, etc. From it the student may learn much of which he is now ignorant regarding the life and individual progress of each republic, and above all, and of greater importance than anything else, in this BULLETIN is encountered that spirit of sincere and altruistic Americanism which arose in the United States some years ago and which prevails with such fervor throughout the nations of America.

THE UNITED STATES MINISTER TO PANAMA.

Hon. R. S. REYNOLDS HITT, recently appointed Envoy Extraordinary and Minister Plenipotentiary to Panama, is the son of the late Congressman R. R. HITT, who was for many years the Chairman of the Committee on Foreign Affairs in the House of Representatives. Mr. REYNOLDS HITT was born in 1876, graduated from Yale University in 1898, and finished his studies at the Harvard Law School in 1901. His first diplomatic appointment was as Third Secretary of the Embassy in Paris, in July, 1901. He was afterwards appointed Second Secretary of Embassy in Berlin, October, 1902. From this post he went as First Secretary of the Embassy in Rome in March, 1905, but returned to Berlin as First Secretary of the Embassy in June, 1908, with subsequent transfer to his present duties.

UNITED STATES PARTICIPATION IN THE BUENOS AIRES EXHIBITION.

There could be no better evidence of the real need of awakening the manufacturers of the United States to the importance of Latin American markets than to make a comparison between the interest they have shown



HONORABLE R. S. REYNOLDS HITT,
Envoy Extraordinary and Minister Plenipotentiary of the United States of America to Panama.

in the great exhibition which is to be held in Buenos Aires this year and the interest which has been displayed by their competitors in Germany, England, France, Spain, and other European countries. Within a comparatively short time after it became known in Europe that this exhibition was to take place, nearly every foot of space that could be given to that part of the world was eagerly taken. On the other hand, if it had not been for the energetic and persistent efforts of the American committee, made up of business men from the United States living in Buenos Aires, having the hearty cooperation of the United States Minister, Hon. CHARLES H. SHERRILL, followed by the efforts in the United States of the International Bureau to make the importance of the exhibition known and to interest manufacturers, it is doubtful if there would have been any representation from the United States worth noting. Special credit is due Mr. J. A. FARRELL, the president of the United States Steel Products Export Company, and one of his assistants, Mr. H. L. JONES, for their efforts in behalf of a creditable exhibit. Through their leadership, some twenty large manufacturers have taken space which will occupy 4,125 square meters. Fourteen other representative firms will participate under the direction of their agents in Buenos Aires. This participation represents private action. It is hoped that the United States Congress will pass the bill appropriating \$200,000 for participation in the exhibitions at Brussels and Buenos Aires so that the Government itself may also send a creditable exhibit for the agricultural section. This would be most interesting and popular in South America because of the reputation the Agricultural Department of the United States has all over the world for improved methods of agriculture. It would resemble in many respects, although on a smaller scale, the exhibits of that department at the St. Louis World's Fair and at the recent Alaska-Yukon-Pacific Exposition in Seattle.

THE WORLD'S PANAMA EXPOSITION AT NEW ORLEANS.

The city of New Orleans is to be congratulated upon the interest which it is displaying in the development of closer commercial relations between the United States and its sister republics. If all the principal shipping centers of the United States would follow the example of New Orleans, there would be a remarkable growth of trade and travel between the American nations. Under the leadership of the Progressive Union, a powerful business men's organization of that city, there has been organized a committee of twenty-five to prepare the way for holding in 1915, the year of the anticipated completion of the Panama Canal, a World's Panama Exposition. If the preliminary efforts of this committee are to be taken as a measure of what will be done in the future, this proposed exposition will be a brilliant success. The location of New Orleans upon the Gulf of Mexico and at the mouth of the Mississippi River, and in the

direct line of north and south travel between the United States and the west coast of South and Central America, Australia, and the Orient, makes it an ideal point for celebrating the opening of the world's greatest waterway. The Director of the International Bureau has been honored by an invitation of the committee of twenty-five to go to New Orleans and be the guest of honor at a banquet given by the Progressive Union on the night of February 18, when he will discuss before that organization the importance, as well as ways and means, of developing closer trade relations between the United States and Latin America, and the direct bearing thereon of the Panama Canal and of a World's Panama Exposition. This committee is made up of men of such prominence in the affairs of New Orleans that their names are herewith given as evidence of the backing which should make the exposition a success. They are: MARTIN BEHRMAN, A. BALDWIN, Jr., PHILIP WERLEIN, C. H. ELLIS, W. B. THOMPSON, HUGH McCLOSKEY, CHARLES JANVIER, T. G. RAPIER, CHARLES GODCHAUX, FRANK B. HAYNE, PETER F. PESCU, MAURICE STERN, JOHN J. GANNON, T. P. THOMPSON, PAGE M. BAKER, ANDREW H. WILSON, A. BRITTIN, ROBERT EWING, J. W. PORCH, T. J. WOODWARD, J. M. THOMPSON, EMILIEN PERRIN, H. B. SCHREIBER, THEODORE GRUNEWALD, GEORGE H. DUNBAR. M. B. TREZEVANT serves as Secretary-Treasurer.

THE FIRST SECRETARY OF THE MEXICAN EMBASSY IN WASHINGTON.

Señor Lic. BALBINO DÁVALOS, the First Secretary of the Mexican Embassy in Washington, was born March 31, 1866. He was educated in his native land and later was admitted to the practice of law. He entered the office of the Minister of Foreign Relations in 1897 and later became Private Secretary to the Minister. His first diplomatic post was that of Second Acting Secretary of the Embassy in Washington, to which he was appointed on September 22, 1905, and the following year filled the positions of First Acting Secretary and Chargé d'Affaires ad interim. In 1907 he was promoted as First Secretary of the Legation in London and was transferred to the Embassy in Washington in a similar capacity in 1909. Señor DÁVALOS also acted as Chargé d'Affaires of the Embassy for a short time during the latter year.

RECENT UNITED STATES DIPLOMATIC APPOINTMENTS IN LATIN AMERICA.

The recent selection by the Department of State of new United States Ministers for several of the Latin-American countries proves conclusively that Hon. PHILANDER C. KNOX, Secretary of State, is desirous of sending to those countries men of energy, ability, and training who will alike be a credit to the United States and agreeable to the officials and people of the governments to which they are accredited. Hon. HENRY L. WILSON, who goes as Ambassador to Mexico, served for many years as Minister



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SEÑOR DON BALBINO DÁVALOS,

First Secretary of the Mexican Embassy in Washington, D. C.

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to Chile, where he accomplished much for the development of better relations between that republic and the United States and learned to speak the Spanish language fluently. His last service as Minister to Belgium has strengthened the conviction of those who knew him of his qualifications for his important duties in the capital of Mexico. Mr. HENRY P. FLETCHER, the new Minister to Chile, distinguished himself as Chargé d'Affaires of the United States Legation at Peking, China, during a difficult period, while his previous service at other posts demonstrated his diplomatic capacity. Mr. JOHN B. JACKSON, who will represent the United States at Havana, Cuba, has had an excellent record in Greece and Persia, while Mr. FENTON R. MCCREERY, who goes to Tegucigalpa, Honduras, has enjoyed valuable practical training as Secretary of Embassy in Mexico and in the Dominican Republic as Minister Resident. Mr. EDWIN V. MORGAN, who will shortly proceed to Montevideo, the capital of Uruguay, has served successfully for several years as Minister in Cuba, and prior to that had enjoyed an extensive training in the Orient. Mr. R. S. REYNOLDS HITT proceeds as Minister to Panama, after having shown his diplomatic capacity as First Secretary of Embassy at Berlin and at other European posts. He is a son of the late Congressman HITT, of Illinois, who for many years served as Chairman of the Foreign Affairs Committee of the House of Representatives. Mr. HORACE G. KNOWLES, the new Minister Resident and Consul-General to the Dominican Republic, made a distinct record for himself as Minister to Roumania, Servia, and Bulgaria, and will be a useful man in building up closer commercial relations between the United States and the West Indies.

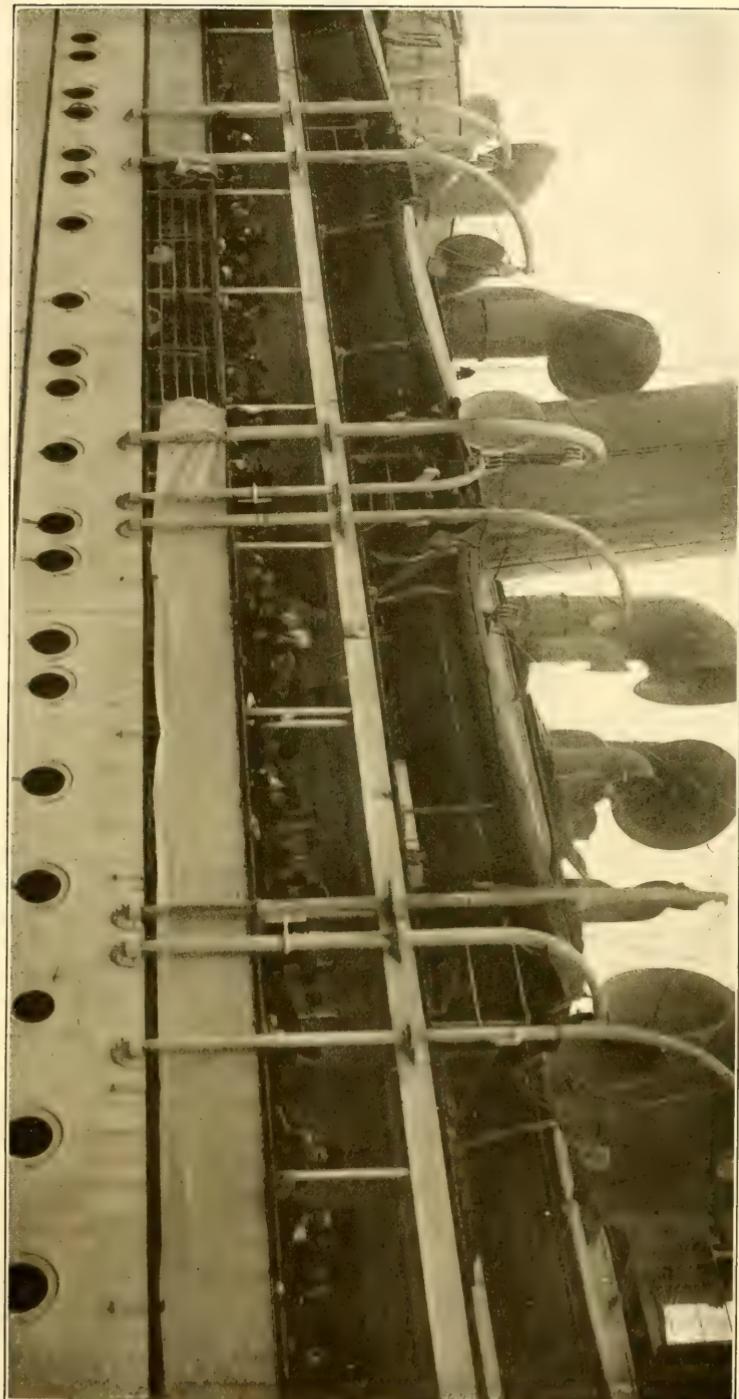
THE MADEIRA AND MAMORÉ RAILROAD.

The article which appeared in the January number of the BULLETIN entitled "The Madeira and Mamoré Railroad" has attracted widespread attention, especially in view of the sensational articles which were recently published in Germany to the effect that the employees of the railway company were not properly treated and were allowed to suffer without protection from the heat and tropical troubles which characterize the jungles of the Upper Amazon. This article by facts and figures shows that the company has endeavored to follow the methods which have been practiced so successfully at Panama through good buildings and hospitals for its employees which would enable them to continue their work in comparative health and security. It is evident that the company and the engineers who are constructing this road are meeting with many of the same difficulties which confronted the United States Canal Commission when it first began operations on the Isthmus. Hundreds of men came back from Panama and Colon complaining that men could not live there in health and that they were not properly housed and fed.

THE HAMBURG-AMERICAN S. S. "BLAUECHER" LEAVING NEW YORK, SATURDAY, JANUARY 22, 1910, ON HER FIRST GRAND CRUISE TO

SOUTH AMERICA AND THE STRAIT OF MAGELLAN.

This magnificent 13,000-ton steamer, carrying 250 tourists, will make the trip to Magellan Strait and return to New York by April 13, stopping at each of the principal cities on the east coast of South America so as to allow the passengers an opportunity of viewing the main points of interest. The places to be visited and length of stay are as follows: St. Thomas, West Indies, 10 hours; Para, Brazil, 24 hours; Bahia, Brazil, 27 hours; Santos, Brazil, 48 hours; Punta Arenas, Chile, 84 hours; Buenos Aires, Argentina, 12 days (including time for excursions across the continent to Santiago and Valparaiso, Chile); Montevideo, 36 hours; Rio de Janeiro, Brazil, 128 hours; Pernambuco, Brazil, 10 hours; Port of Spain, Trinidad, 32 hours; Kingston, Jamaica, 24 hours.



THE S. S. "BLUFCHER" LEAVING NEW YORK HARBOR, SATURDAY, JANUARY 22, 1910, ON HER WAY TO SOUTH AMERICA.

The vessel, which is a veritable floating hotel, possessing all the conveniences to make such a trip a success, including a modern gymnasium, a well-selected library, a dark room for amateur photographers, and a daily newspaper, will be the home of the excursionists during the whole voyage of 81 days. Mr. Charles Furlong, the eminent writer and traveler, accompanies the party and will deliver illustrated descriptive talks on the countries to be visited. This cruise will permit those who make the trip to see a number of places which could not be reached by the regular steamers. One-half of the whole period will be taken up by shore excursions, affording an opportunity to view the mighty Amazon, the glaciers and flora of the Strait of Magellan, the awe-inspiring mountains of the great Cordillera of the Andes, and the beautiful modern and progressive cities of our sister Republics so little known to citizens of the United States.



These reports were spread largely, however, by those who did not know how to adapt themselves to tropical surroundings, and who expected to find conditions exactly as they would in a well-developed northern land. It required time to make a conquest of the jungle, but it was eventually accomplished, and now a man can live and work upon the Isthmus under conditions and with surroundings almost as healthful as those to be found in any part of the United States. While it may not be possible to perfect the same system in the distant interior of Brazil as has been carried out at the much more accessible point of the Isthmus, it would appear that an honest effort is being made to complete the Madeira and Mamoré Railroad in the face of most serious difficulties. When it is completed it will have a great influence on the rubber trade in the lower section of Bolivia and in providing a route to the markets of the world for a section of South America which has heretofore been regarded as too remote for legitimate exploitation.

THE UNITED STATES CONSUL-GENERAL AT BUENOS AIRES,

RICHARD M. BARTLEMAN, the United States Consul-General at Buenos Aires, was born June 9, 1863, and is a native of Massachusetts. He was educated in public and private schools and commenced his business career as secretary of the Massachusetts Humane Society, later engaging in civil engineering. His service with the Government commenced on June 14, 1890, when he was appointed Secretary of Legation at Caracas, Venezuela. Mr. BARTLEMAN has had extended experience in the Consular Service, being appointed United States Consul at Antigua November 4, 1895, and at Malaga June 11, 1896. He retired from the latter post in April, 1898, but was reappointed on June 27, 1899, and was successively appointed Consul at Geneva, May 8, 1900; Valencia, October 31, 1900; Cadiz, February 12, 1903; and Seville, May 7, 1904. He was appointed Consul-General at large on May 14, 1906, and Consul at Madrid August 15, 1907, and has occupied his present post since January 11, 1909.

THE BANQUET OF THE ROYAL MAIL STEAM PACKET COMPANY.

On Thursday, January 13, the Royal Mail Steam Packet Company, which has been one of the pioneers in steamship service between the United States and Europe on the one hand and South America on the other, gave a dinner on the steamship *Avon*, in New York City, which was attended by the representative shipping and steamship men of the United States who are interested in trade with the Central and South American countries. The Director was invited to attend, but was obliged to send his regrets because of an engagement to address that



HON. RICHARD M. BARTLEMAN,
Consul-General of the United States of America at Buenos Aires, Argentina.

evening the Latin-American clubs of the University of Pennsylvania, Philadelphia. In a communication to Mr. LLOYD B. SANDERSON, the general agent of the steamship line, explaining his inability to be present, the Director said:

I need hardly tell you how much I am interested in the development of closer commercial relations between North and South America. In the advancement of foreign commerce perhaps the most powerful agency is good steamship service. This does not mean merely the freight vessel, but the passenger boat as well. Business men, travelers, and all classes of persons who go back and forth between nations require the best accommodations just as people who go back and forth between cities and towns in one country expect this kind of service upon the railroad trains. We can no more conduct business over the seas in slow-going, uncomfortable vessels than we can make business successful on land through the agency of slow-going and uncomfortable passenger trains. In the building up of trade between the United States and Europe on the one hand and the Caribbean and eastern coast of South America on the other, the Royal Mail Steam Packet Company has been a powerful and beneficial influence, and I hope that the growth of its traffic in the future may justify the enterprise it has shown in the past.

LATIN AMERICA AT THE UNIVERSITY OF PENNSYLVANIA.

The University of Pennsylvania, in Philadelphia, Pennsylvania, is giving much attention to awaking interest among its students in the Latin-American countries. In forwarding this movement Dr. L. S. ROWE is largely responsible. From his travels in the Latin-American republics he has learned the advantages of educating the youth of the United States concerning the progress and possibilities of those countries and of bringing their young men to this country for education. They return to their home countries familiar with the people and institutions of the United States and do much to bring about closer relations of friendship and commerce. He also realizes the advantage that would correspondingly ensue from sending young men from the United States to the universities of Latin America, and it is to be hoped that in the near future there may be arranged a systematic exchange of students that will be of benefit to all the countries concerned.

CONSUL OF URUGUAY IN NEW YORK CITY.

ALFREDO METZ GREEN, the Consul of the Republic of Uruguay in New York City, is the youngest of the consular representatives in that port, having been born in Montevideo, Uruguay, in the year 1880. After pursuing his studies in the best educational establishments of his natal city, he entered commercial life, occupying various posts of responsibility not only in his own country but also in Argentina. Later he served in the army of Uruguay, but forsook a military career to accept the position of honorary Consul in New York in January, 1907, and became the actual



SEÑOR DON ALFREDO METZ GREEN,
Consul of Uruguay to the United States in New York.

Consul a year later. Mr. METZ GREEN has labored constantly and with great success to improve the commercial relations between his country and the United States.

A PRACTICAL STUDENT OF PAN-AMERICAN TRADE.

Among the active younger business men of the United States who are making a careful study of Latin America is Mr. JOSEPH R. DARLING, whose portrait appears in this number. Mr. DARLING is a civil engineer who graduated from engineering institutions of standing in the United States and Europe. During the past ten years his special interest and studies, commercial and otherwise, have been in the Latin-American countries, where he has served as a confidential and special representative of large American firms, and he has recently returned from a ten months' trip to the leading cities of Central and South America as a special representative of the Gulf Refining Company. Mr. DARLING has published numerous articles dealing with the commercial resources and opportunities of these republics, particularly in reference to the exploitation of their banana, rubber, and oil fields. His personal relations with the men of affairs in Latin America have been such that he has been able to do much toward developing closer relationship between the Latin-American nations and the United States. An article discussing commercial conditions in Latin America, prepared by Mr. DARLING, appears elsewhere in this issue.

AN ADDRESS BY THE SECRETARY OF THE INTERNATIONAL BUREAU.

Attention is called to the address published in this issue delivered at Columbia University, New York City, in the latter part of December, by Mr. FRANCISCO J. YÁNES, the Secretary of the International Bureau. Mr. YÁNES has been a most careful student of Latin-American history, and has the advantage of Latin-American birth and training, which adds much to the value of his viewpoint. The Director has received so many requests for copies of Mr. YÁNES's speech that he has pleasure in giving space to it in this BULLETIN.

THE UNITED STATES CONSUL AT CEIBA, HONDURAS.

DREW J. LINARD, the United States Consul at Ceiba, Honduras, was born October 21, 1866, at Harrisburg, Pennsylvania. He attended the San Mateo Military Academy in California and entered college at Burlington, New Jersey. Later he engaged in civil engineering, which he pursued for twenty years in Chile, Peru, Yucatan, Mexico, and in the United States. He was appointed consul at Ceiba on March 30, 1907, after examination.



DREW J. LINARD,
Consul of the United States of America at Ceiba, Honduras.



BOOK NOTES

Diplomatic Memories, by JOHN W. FOSTER: Houghton, Mifflin Company, Boston and New York (1909), 2 volumes. Price, \$6. Issued through the Riverside Press, the craftsmanship of these two volumes is an assured quantity, and the wide experience of the author, both as a literateur and diplomat, insures the adequate handling of matters of exceeding interest. For the readers in the Columbus Memorial Library the sections covering Mr. FOSTER's connection with Pan-American affairs are of paramount interest. Entering the diplomatic service as United States Minister to Mexico in 1873, he continued in that capacity for seven years. During that period he witnessed the transfer of executive authority from the Lerdist party to the present head of the State, PORFIRIO DIAZ, and also the union of the two parties through the marriage of DIAZ to the daughter of the leader of the opposite faction. Much time and thought were devoted by Minister FOSTER to the development of better commercial and communication relations between Mexico and the United States, and much of the present international friendliness may be traced to his effective diplomacy. Upon the termination of his duties in the Mexican Republic and subsequent missions to Russia, Mr. FOSTER accepted the Spanish post in 1883, where his knowledge of Spanish America made him peculiarly acceptable, and where the completion of a reciprocity treaty between the United States and Mexico was looked upon as a forerunner of similar negotiations in regard to Cuba and Porto Rico. These were successfully carried out, and Mr. FOSTER returned to the United States with the text of the treaties, and, much to his surprise, complete publication of the same was made in a New York paper previous to its submission for action of the Senate as a result of newspaper enterprise in Madrid, which had cabled the entire document. These treaties subsequently failed of ratification, due to political changes in the country. A second mission to Spain in 1891 had for its main object the arrangement of a sugar schedule for Cuban interests in connection with a new United States tariff, and on this occasion a second reciprocity treaty with regard to Cuba and Porto Rico was negotiated which had a more successful outcome, and whose operation largely increased United States trade with the Spanish Antilles. From that time the reciprocity negotiations of the country were confided almost entirely to Mr. FOSTER, who was held as an authority on all matters connected therewith. The diplomatic career of the writer embraced such events as The Hague conferences, transactions with China, India, Japan, and Great Britain,

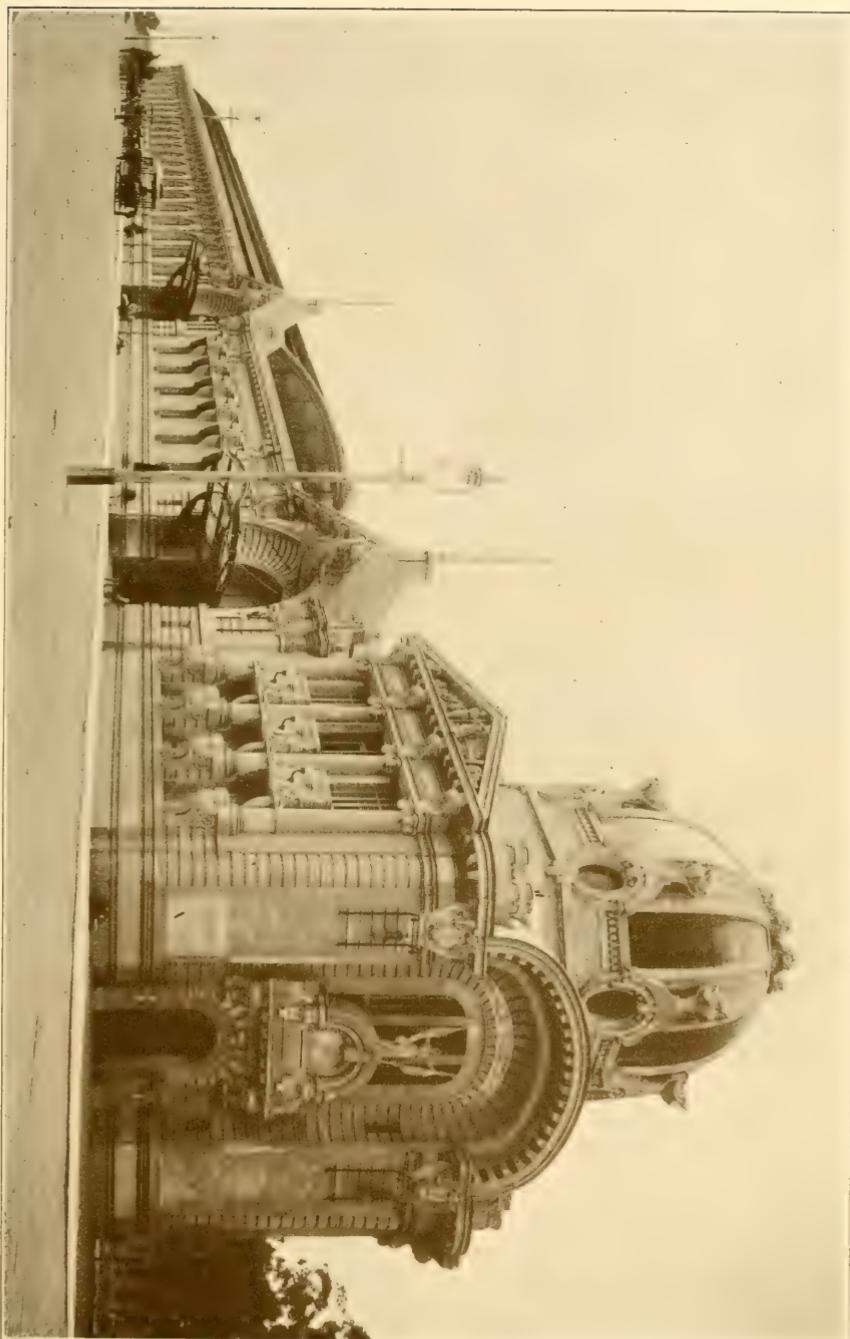
in all of which his legal erudition and wide acquaintance with public affairs and men rendered him an invaluable assistant in the world policies of his country. In the narration of the personal experiences arising out of these national episodes Mr. FOSTER is enabled to interweave many intimate glimpses of rulers and statesmen, and to afford a closer view of their springs of action than is possible in more restricted diplomatic utterances.

A reprint from the Report of the United States Commissioner of Education for 1908 has been made, covering the modern aspect of higher education in Spanish-American countries and giving an idea of the grade and quality of modern university instruction as obtained from the courses of study, the published theses of the students, and the lectures of the professors. In the Argentine Republic, the Universidad Nacional de La Plata is given preferential mention by reason of the fact that it is the newest institution, having been organized on a thoroughly modern plane in 1906. The University of Montevideo also exhibits a decidedly modern practical tendency in its course of instruction, as is the case with the Catholic University located in Santiago de Chile. A summary of the papers presented for degrees in the latter institution shows a strictly practical and technical bent. Of the renowned University of San Marcos at Lima, Peru, founded fifty-six years before the settlement of Jamestown in the United States, it is stated that until latterly the academic line had been followed in the preparation of theses, so that when in 1902 the new or modern tendency was illustrated by a presentation of the importance of zootechnics as a branch of university study, the lecturer felt called upon to apologize for presenting so unwonted a theme before the academic audience. The publications of the Central University of Ecuador at Quito, the Central American institutions of learning, and the Mexican and Cuban national schools are all showing a marked tendency toward the practical in higher education, indicating that more time is given to studies which prepare immediately for the professions and practical affairs. Thus schools of engineering, of commerce, and the like are being organized, the main trend being toward such knowledge as shall improve the material condition of the nation.

The Annual Report of the Isthmian Canal Commission for the fiscal year ended June 30, 1909, is a stupendous outline of a colossal task executed on a scale commensurate with the undertaking. Every feature of the work is reported on at length. Construction and engineering, subsistence, accounts, civil government, sanitation, care

THE STATION OF THE BUENOS AIRES GREAT SOUTHERN RAILWAY AT LA PLATA, ARGENTINA.

The structure is a fitting example of the high artistic standard adopted by the people of this great Republic of South America. This elegance of architecture is shown not only in their public buildings but in railroad stations and similar works of recent construction.



of employees, costs and offices are covered generally and specifically, being supplemented by numberless charts, drawings, photographs, and statistical statements. The revised estimate of 1908 for the construction of the Panama Canal places the cost of actual construction at \$213,671,000, to which are to be added certain general items for roads, building and repairing houses, contingencies, and railroad expenses amounting to \$84,095,000; in all, \$297,766,000. The estimate of the board of 1906 was: Cost of actual construction, \$116,421,000, to which was added 20 per cent, or \$23,284,200, representing general items; in all, \$139,705,200. Neither of these estimates included the cost of sanitation, civil administration, and payments for franchises, as authorized by the Spooner act of June 28, 1902. In the estimate for 1908 these three items are placed at \$20,053,000, \$7,382,000, and \$50,000,000; in all, \$77,435,000. This, added to the estimate above, will make the total cost of the canal \$375,201,000. Against this estimate a credit of \$15,000,000 is allowed on account of municipal improvements in Panama and Colon, loans to the railroad company, and miscellaneous receipts, but no account is taken at this time for any allowance for salvage from the plant upon completion of the work.

A Handbook of Mexican Law, by ROBERT JOSEPH KERR: Pan American Law Book Company, Chicago (1909). This abridgment of the principal Mexican codes is designed to meet the need arising from an ignorance of laws and business conditions in Mexico on the part of most of the Americans who have made investments in the Republic. Although complete translations of each law may not be required, it is imperative for the adequate handling of matters that the principal provisions of the law and its application be known. Of course the final and only absolutely reliable authority is the original itself, so it must be remembered that the handbook is intended to be used as a help and not as the ultimate standard. The method adopted in the compilation has been to abridge the Constitution of Mexico and the most important federal codes and laws. The construction and titles have been followed absolutely, so that reference to the originals is rendered easy, and through the copious index and footnotes the reader is enabled to locate chapters and articles where the same subject is treated in different codes. The mining law as published in the volume has been recently superseded, and it is promised that the translation of the new one will be furnished as a supplement, free to all registered purchasers. The value of the volume as a book of reference can not be overestimated.

TERRY's Mexico with 26 maps and plans: Houghton Mifflin Company, Boston (1909). Price, \$2.50. This valuable handbook for travelers prepared by T. PHILIP TERRY, follows closely in general make-up the standard set for all compilers of guidebooks by BAEDEKER. The need of just such a publication has arisen through the tide of travel that is turning toward the countries to the south of the United States and in the one at hand the results of many years of personal observation and experience are embodied. It contains a description of every place of importance from the Rio Grande at the north, to Guatemala at the south, with ample notes on history, architecture, language, literature, painting, native races, ruined cities, churches, mines, railways, products, and, in fact, covers thoroughly a field whose importance is growing each year. That the traveler may fully appreciate the characteristics of Mexican environment both in the present and the past, luminous descriptions are given of the national ideals in architecture, literature, and art, and a chronological table from the seventh century to the year 1909 renders him fully conversant with the formative events of the country's life. For the general reader it is replete with interesting information; for the student it is a compendium of attainable data, and for the tourist it is invaluable.

"La Nature du Papier-Monnaie," Envisagé sous son aspect historique et économico-monétaire: Librairie L. Larose & L. Tenin, directeurs, Paris (1909), by GUILLERMO SUBERCASEAUX, professor of political economy, University of Chile. In a monograph of 44 pages, published in French, Dr. GUILLERMO SUBERCASEAUX has placed in available form for a larger reading public the excellent paper which he presented to the Pan-American Scientific Congress on "The nature of [paper money]." Doctor SUBERCASEAUX, who has been several times Minister of Finance of Chile, and is now one of the leading members of the Chilean Congress, has made a lifelong study of financial problems. This work presents in condensed form the results of his investigations. In one form or another, the monetary problem is one confronting all the countries of the American continent, and it is, therefore, of the greatest importance that there be a constant interchange of experience between the republics of the Western Hemisphere. The Pan-American Conference, held at Rio de Janeiro in 1906, recognized this fact in calling for a series of monographic studies of the monetary situation in each of the republics represented at the conference. This monograph may well serve as an introduction to the series of studies thus contemplated. It is to be hoped that he will supplement this work with a more detailed study of Chilean experience.

Twenty-Five Years of Mining, 1880-1904, by EDWARD ASHMEAD: The Mining Journal Press, London (1909). In this volume are collected a series of papers in regard to the exploitation of minerals published in the "Mining Journal" of London. A general résumé of the industry, principally from the viewpoint of the British investor, is furnished, and though unfortunately the data is not complete for a later period than 1904, the information is well classified and of great value. The capital of British companies invested in Latin America in that year was distributed as follows: Mexico, £30,060,478, with 184 companies; Central America, £5,264,550, companies numbering 41; South America, £62,915,920, companies 472. Under the last-named classification Chile and Peru combined represent the greatest capital, figuring for £19,733,020, with Venezuela ranking next for £15,598,707.

Explorers in the New World, by MARION McMURROUGH MULHALL; Longmans, Green & Company, 39 Paternoster Row, London. New York, Bombay, and Calcutta. (1909.) This volume, designed to cover in a short space the characteristics and achievements of the most noted makers of history in modern times, discusses briefly the predecessors of Columbus in his particular field of labor and carries comment forward through the opening up of the entire western world, mentioning not only the explorers but also the agents who either by military campaigns or peaceful missions have contributed to this end. Of particular interest is the sketch of the Jesuit Fathers' work in Paraguay where, from 1536 to 1768, their beneficent ministrations brought the natives to a high degree of prosperity. Less spectacular than some of the great fighters whose deeds are outlined in this book, the conquerors through faith evinced no less heroic qualities. A special chapter is devoted to the Irish commanders in Chile and Peru.

Around the World with the Battle Ships, by ROMAN J. MILLER: A. C. McClurg & Co., Chicago (1909). The writer of this interesting volume was chief turret captain of the U. S. S. *Vermont* during the now historic cruise of the American Navy in 1907-8. Of special interest are the chapters devoted to the visits to Latin-American ports and the cordial appreciation of the magnificent hospitalities showered upon the officers and men. A companion publication, Pictorial Log of the Battle Fleet Cruise Around the World, has been prepared by the same author and issued through the same house. The illustrations are from photographs by H. R. JACKSON, and the volume forms a delightful addendum to the literature of the cruise.

The Recognition of Minerals, by C. G. MOOR, with Monographs of Geology, Ore Deposits, etc., by DONALD A. MACALLISTER: The Mining Journal Press, London. Inasmuch as the fascination of exploring the depths of the earth for mineral wealth has an established hold upon humanity, every aid in determining the value of chance finds is of importance. The volume in reference is a collection of notes and tests for the use of travelers and prospectors, being specially intended for persons not possessing sufficient knowledge to enable them to distinguish minerals of commercial worth from ordinary rocks and stones. In addition, the general market value of the minerals is supplied, also an outline of their application in arts and industries and of the demand which usually exists for them.

In connection with the incursions into Latin America of the industrial interests, a new field of romantic and adventurous fiction has been opened up. It is therefore interesting to note the following books issued through the publishing house of LOTHROP, LEE & SHEPHERD (Boston) as a Pan-American series: Young Explorers of the Amazon; Lost on the Orinoco; For the Liberty of Texas; Treasure Seekers of the Andes; The Young Volcano Explorers, by EDWARD STRATMEYER; also Under Scott in Mexico and With Taylor on the Rio Grande, by the same author, and published under the same auspices.

Two other handsomely illustrated volumes have been received by the Columbus Memorial Library from the publishing house of FREDERICK A. STOKES COMPANY (New York): The Romance of Mexico, by MARGARET COXHEAD, with color plates by T. H. ROBINSON, and Gibraltar and the West Indies, by JOHN LANG, with illustrations in color by J. R. SKELTON. Both writers serve their historical refections with a sauce of fancifully seasoned facts which stimulates to further indulgence in so attractive a mental feast.

The Columbus Memorial Library has recently received a carefully prepared bibliography, giving in detail the writings of Dr. PAUL CARUS, of the Open Court and the Monist, dealing principally with the essentials of philosophy. The special purpose to which it may be applied in the Library is to be found in several essays treating of the foreign policy of the United States.

Birds of the Leeward Islands, Caribbean Sea, by CHARLES B. CORY (1909). The results of ornithological researches made in behalf of the Field Museum of Natural History, Chicago, are embodied in this pamphlet, the area covered including the islands of Aruba, Bonaire, Curaçao, Islas de Aves, Los Roques, Orchilla, Tortuga, Blanquilla, Los Hermanos, Testigos Islands, and Margarita.

WHAT IS IN THE MAGAZINES

“The Times” (London), in publishing its special South American number of 87 pages for December 28, 1909, places before the public a valuable compendium of information touching the great countries extending from the Caribbean Sea to Cape Horn. As is natural, by reason of the preponderance of British interests in the Argentine Republic, it is to that country that greater space is devoted and, under that classification, a vast flood of details as to commerce, resources, history, development, fine arts, railways, and industries is supplied. In a diminishing ratio the other republics are covered and data furnished to support the assertion that “few portions of the globe would seem to have a brighter future than South America, or to offer richer rewards to merchants who are willing to help in trade and to capitalists who are ready to further development.” The figures are in all cases brought up to the close of 1908. In order to secure adequate authority for all statements concerning the republics, “The Times” dispatched numerous special agents charged with the collection of information and data at first hand from the officials and agencies of the governments; furthermore the services of specialists on leading industries or interests in the respective republics were enlisted and guaranty was thus secured for the absolute reliability of the information. It had also the cooperation of nearly the whole of the daily press of Rio de Janeiro, Buenos Aires, and Montevideo. A striking article is contributed by Dr. E. S. ZEBALLOS, the well-known Argentine statesman, formerly Minister of Foreign Affairs and at present editor of two reviews. Probably the most interesting articles from the viewpoint of capital are those dealing with the railways of the Argentine Republic and Brazil, in the preparation of which representatives of a large percentage of the mileage discussed were participants. In addition to the foregoing, citation is made of indebtedness to the following: For a number of historical facts and views, to Mr. THOMAS C. DAWSON, former United States Minister to Chile and now Chief of the Latin-American Bureau of the State Department of the United States, and to Dr. ALBERT HALE of the International Bureau of American Republics. For certain phases of trade conditions, the observations and conclusions of Mr. LINCOLN HUTCHINSON and Mr. CHARLES M. PEPPER, Special Agents of the United States Department of Commerce and Labor, have been drawn on as well as the consular and other reports of the Department’s Bureau of Manufactures; whilst for other information, the writings of Mr. JOHN BARRETT, who also prepared a special article for the issue,

have been consulted. Concerning Mr. BARRETT and his work the paper states:

He is the active Director of the International Bureau of the American Republics and the editor of the numerous publications of that organization. Its monthly bulletins, which are probably the most prolific sources of knowledge available regarding South American countries, have proved especially serviceable.

Photographs of personages and localities are numerous and as finally compiled and issued the publication is one which should be in the hands of all students or business men having interest in Latin America. As an instance of journalistic enterprise it is absolutely unique.

The advanced conditions prevailing in Panama are exemplified by an article on school teaching in Panama by MAY L. BAKER in the "Independent" for December 23, 1909. The Isthmus is only 48 miles across, yet within that distance there are 18 towns where the six trains that cross each day from ocean to ocean make regular stops. In any town where there are enough children to justify building a school one has been opened, and children living in towns where none exists are given free transport to the nearest educational center. The schools are well equipped and a plan for joining them closely to the general office has been made effective through daily notices sent by mail. A peculiarity of the system is the heterogeneous character of the pupils. They represent 36 different States, 2 Territories, and the District of Columbia, besides over a dozen foreign countries. Another peculiarity affecting the pupils is the cosmopolitan aspect of their surroundings, arising from the fact that they are brought in contact with such a variety of nationalities, and that localities of which the normal child in the United States has only a vague notion, as connected with the early history of America, are part of the daily environment of the wondering child in the land of Balboa and the early navigators.

Under the title "An American enterprise in Chile," GEORGE E. MONTANDON narrates in "Overland Monthly" for December, 1909, the difficulties and their successful vanquishing in operating a copper mining company near the city of Rancagua. The engineers had to meet problems of transportation, power, milling, metallurgy, and mining. First of all a wagon road was built for the transport of necessary machinery and materials, requiring from 150 to 250 carts and over 2,000 oxen for six months. After operations were begun at the mines, aerial tramways were erected to convey the ore and supplies over the deepest snows, and for two years the work has continued day and night, summer and winter, without interruption. Further-

more, the construction of a railroad line from the city of Rancagua to the mines has been undertaken. Both the Chilean Government and the people are heartily in favor of enterprises which demonstrate to the world the resources of their land; mining laws are favorable and opportunities are afforded to all legitimate companies.

The "Banker and Investor Magazine" for December, 1909, reproduces valuable information furnished by United States Consul-General GEORGE E. ANDERSON from Rio de Janeiro concerning banks in South America. It is stated that there are eight Anglo-South American banks with shares quoted on the London Stock Exchange, of which five are companies registered in England and directed from London, the others being local organizations whose registered offices are in the countries where the bulk of their business is transacted. The subscribed capital of these banks is given as \$80,895,044, with a paid-up capital of \$58,060,074 and a reserve fund of \$38,971,019. In addition to the foregoing there are Italian, Spanish, French, and Portuguese banks in South America; in fact all the principal trading countries, the United States excepted, are represented by banking houses.

One year after the foundation of the Odontological Society of Chile, this progressive young body announces itself to the outer world by a very creditable journal, "*Revista Dental*," the purpose of which, as set forth in the introductory note of the editors, is not so much to bring new and original investigations as to offer useful extracts of valuable foreign literature, to which the greater portion of its pages is devoted. In spite of these modest pretensions the inaugurate June issue of 1909 contains a very commendable original communication on "Hyperesthesia of the dentin," by RAFAEL GERMAIN; the July issue, an essay on "The hygiene of the first dentition," by the director, Dr. LUIS DE LA BARRA LASTARRIA; the August issue, a paper on "The use of the X ray in dentistry," by CARLOS E. BOLTON. A department of "Useful hints," one of "Proceedings of the Odontologic Society of Chile," and one of "Questions and answers" complete the make-up of this journal.

The issue of "*América*" for December, 1909, is devoted especially to Costa Rica and to an exposition of the national life of that prosperous Republic. The stirring national hymn of the country prefaces the volume and the subject-matter covers contributed articles concerning the progress of the country from colonial times to the present day; an analysis of the Court of Cartago; educational notes from the pen of the Minister to the United States, Señor Don JOAQUIN BERNARDO CALVO; followed by an outline of the development of public

instruction in the Republic and an account of the industrial energies of the inhabitants. The Costa Rican poet, LISÍMACO CHAVARRÍA, is represented by some charming verses, and illustrations innumerable of localities and personages further add to the attractiveness of the publication. The cover is decorated with a reproduction in color of the National Theater.

“The Sister Republics” for December, 1909, has a charming article on the Christ of the Andes, the statue erected by the Chilean and Argentine nations in celebration of the peaceful settlement of a boundary question between them in 1904. Cast in bronze from old cannon it stands 26 feet high, supported by a gigantic column surmounted by a globe on which the map of the world is outlined. The cross held in the left hand of the Christ rises 5 feet above the statue and on one of the tablets at the base is the following inscription in Spanish: “Sooner shall these mountains crumble into dust than the people of Chile and Argentina break the peace to which they have pledged themselves at the feet of Christ the Redeemer.”

To the November, 1909, number of the “Exporters’ Review,” Mr. PERCY MARTIN contributes the first of a series of articles to be furnished by him during his tour of Central and South America. The outlook for American trade in Venezuela is reported as decidedly propitious and all things seem ripe for a revival of industry and of financial stability. In agricultural machinery and patent medicines the United States leads as a source of supply, though Great Britain stands at the head of countries of origin for imports in general, with the United States second and Germany third. So far as the principal exports from Venezuela are concerned, the United States and France are and have long been the chief customers.

In the “Catholic World” for January, 1910, THOMAS P. McLoughlin narrates in agreeable manner his impressions during a visit to Mexico. A double purpose animated the traveler—to see the country and to study the actual condition of the Catholic Church within its borders. Appreciative mention is made of the devotion to the faith existing in the lower classes, and attention is called to the fact that whereas the American Indian in northern countries is rapidly becoming extinct through the applied processes of civilization, in Mexico, under the Franciscan Fathers, millions are still toiling and dwelling in the land of their ancestors and pursuing, though in poverty, the arts of peace.

The preliminary paper on “Mexico as it is,” to be continued through succeeding issues of the magazine, appears in “Sunset”

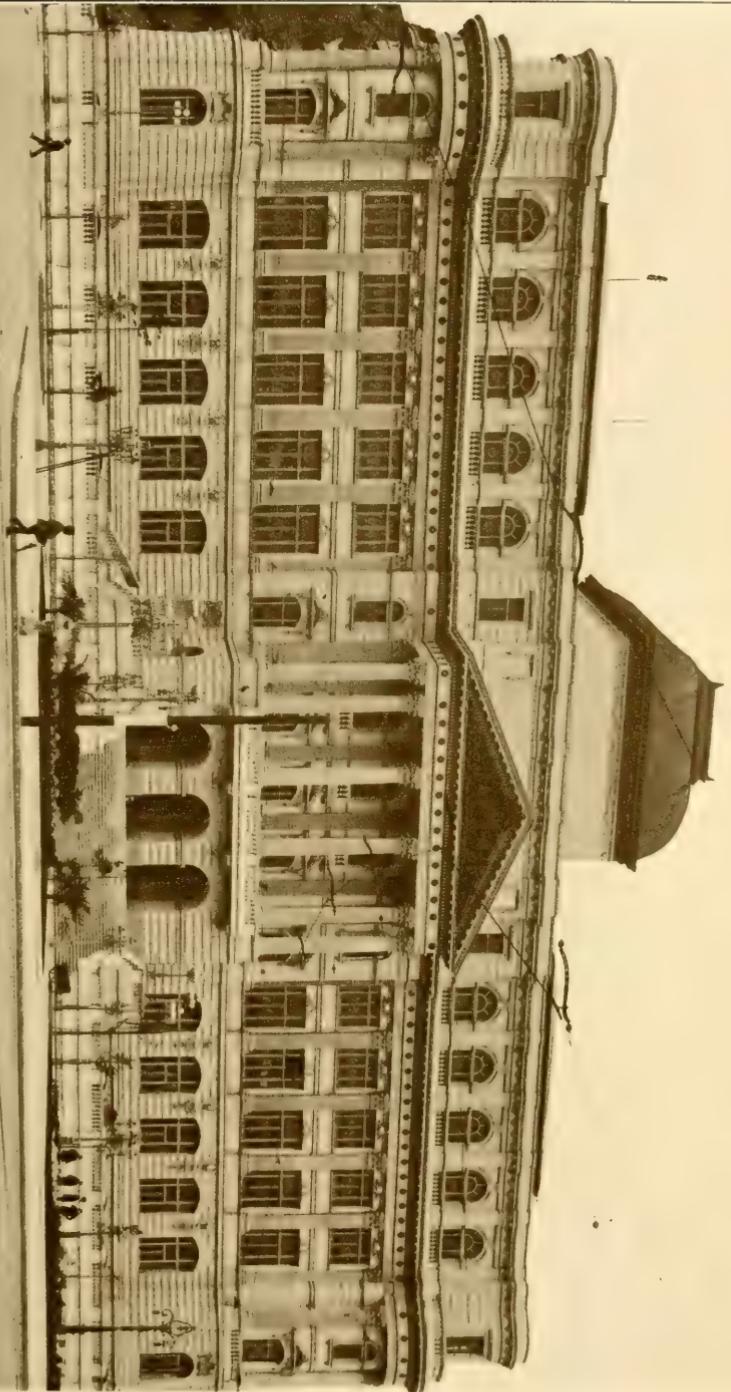
for January, 1910. Though presented to the public under the pen name of GASPAR ESTRADA GONZALES, the articles are vouched for by the editors of the magazine as from a recognized authority on Mexican affairs. Reference is made to the approaching presidential election to be held in the Republic, and that the benefits enjoyed under the present régime may be thoroughly understood, the writer outlines briefly the conditions prevailing prior to the administrations of PORFIRIO DIAZ, the maker of modern Mexico.

"The Economist" (London) for December 18, 1909, in considering the transport question in northern Brazil, states that the Amazon system offers 25,000 miles of navigable waterway, thus furnishing the largest and most economical means of transporting produce of any country in the world. The immense natural wealth of the region is restricted in its development owing to the fact that the river systems are not adequately linked by railroad connections, and it is in the union of the two that the future of the country lies. The same publication has an interesting article on the commercial history of rubber.

The "National Magazine" for January, 1910, publishes an appreciative sketch of the Minister of Costa Rica at Washington, Señor Don JOAQUIN BERNARDO CALVO, the Dean of the American Diplomatic Corps at the United States capital. To Señor CALVO is accorded the distinction of having established the first daily paper in Costa Rica. He was also the secretary of the Costa Rican delegation to the First Pan-American Conference, since which time he has been constantly a promoter of the interests of the Pan-American Union.

Under the alarming title "The Panama Blunder," JULIO F. SORZANO, M. Am. Soc. C. E., writes for the January, 1910, issue of "Van Norden" a scathing criticism upon the Panama Canal enterprise and construction. Readers who, like Cassandra, are fond of uttering prophecies of evil will find abundant prompting for their direful predictions in the article referred to, but it is unlikely that the work will be halted or abandoned in consequence.

The "Editorial Review" for December, 1909, and January, 1910, in its reproduction of comment covering world affairs, quotes the "Newark Evening News" on the commercial and industrial invasion of South America by foreign interests, the "Boston Advertiser" regarding stability of government in Mexico, and in the later number has a paper by HERIBERTO BARRON, a member of the Mexican National Assembly, on the politics of the Republic.



THE NEW PUBLIC LIBRARY AT RIO DE JANEIRO, BRAZIL.

This is one of the latest of the many handsome public buildings which have been erected in the Brazilian capital. It was recently completed and the contents of the old library have been installed in the new one. The building is modern in every respect and has a capacity of a million volumes.

The press of the United States, like that of all interested countries, has made extensive comment concerning the final piercing of the Andes by the completion of the tunnel which links Chile and the Argentine Republic. The "Review of Reviews" for January, 1910, publishes an interesting drawing showing the line of cleavage and the height of the cumbre or mountain summit above sea level.

Supplementary to the article appearing in the "North American Review" for November, 1909, as to the use of the Panama Canal to the United States without national ships, BERNARD N. BAKER in the issue for January, 1910, discusses the means whereby such ships may be acquired.

As the text descriptive of a series of very beautiful pictures of Nicaragua printed in the "National Geographic Magazine" for December, 1909, the bulk of the BULLETIN "Review" of that country as published in the July number is reproduced.

In "Moody's Magazine" for December the truth about Mexico is told by ELISHA HOLLINGSWORTH TALBOT, concerning which the Consul-General of Mexico in New York states that the matter "merits the grateful appreciation of every American and every Mexican who loves truth."

"Commercial America" for December, 1909, publishes a valuable paper covering the rubber trade of the world by JOHN J. MACFARLANE, in which the early history and gradual development of this important industrial product is outlined.

In addition to its general notes covering banking interests in Latin America, the "Bankers' Magazine" for December, 1909, reproduces an article from the "Wall Street Journal" showing the gradual movement on the part of Latin American countries toward the adoption of the gold exchange system.

A comprehensive review of the annual report of the Isthmian Canal Commission for the fiscal year 1909 appears in the December, 1909, issue of the "Engineering Magazine," in which the main features are compactly presented.

The "Textile Manufacturer" in its issues for December 9, 16, and 30, 1909, presents the status of the trade in cotton goods in Nicaragua, Salvador, and Costa Rica.

“The Independent” for December 30, 1909, in its survey of the world, covers in its usual succinct but adequate manner the political situation in Nicaragua at the opening of the new year

A critical survey of Nicaragua under the régime of General ZELAYA is made by FREDERICK PALMER in the “Outlook” for December 18, 1909.

The “Bankers’ Magazine” for January, 1910, has a pleasant account of Mexican town and country, written by R. S. CAUVIN, under the title, “A Mexican travelogue.”



LATIN-AMERICAN NOTES

British investments in Brazil are recorded to the value of £14,794,697.

Pawn shops in Chile are under special regulations of the General Government.

Latest census returns of October, 1909, report the population of Buenos Aires at 1,202,000.

Gen. DOMINGO VASQUEZ, an ex-President of Honduras, died at Tegucigalpa, the capital of the Republic, December 12, 1909.

The Chilean Government has in contemplation the establishment of a school for instruction in wireless telegraphy in connection with the naval establishment.

Announcement has been made of a new transport service between Galveston, Texas, and Puerto Cortez, Honduras, to be conducted primarily for the carriage of fruit.

Contracts have been signed by the Argentine Government with English, French, and German firms for 12 "destroyers," at an aggregate cost of £1,531,000, to be delivered within fifteen months.

Brazilian agents are endeavoring to create a United States market for native fruits and the Government has offered prizes to exporters showing the largest and best packed shipments of such products.

Señor ALBERTO MACKENNA SUBERCASEAUX has been designated as Comisario General (Commissioner General) of the International Exposition of Fine Arts to be held in Santiago de Chile in September, 1910.

A government appropriation of \$500,000 gold was made by the Mexican authorities for the relief of the poor in consequence of the shortage of corn in districts where the crops suffered from severe frosts.

It is estimated that the lighting of Buenos Aires for the centennial celebration will cost \$22,000 each night. Incandescent lamps to the number of 391,000 of 10 candlepower each are to be placed in the streets.

The Tehuantepec Railway Company, of Mexico, has just placed 210 new box cars on its line, in consequence of the increased freight traffic occasioned by the handling of salt, tobacco, coffee, and sugar cargoes.

A large shipment of steel rails from the United States port of Savannah to South America was reported recently. Five cargoes destined for Brazil are reported by the Chamber of Commerce of that city.

In connection with the permission to construct a 1,000-foot dock along the water front at Valparaiso, the Chilean Government has

also granted to the same concessionaire the privilege of establishing a crematory.

The railway from the port of Ilo, in southern Peru, to Moquequa, an inland town, has been completed and work has begun on the Huancayo to Ayacucho extension. This is part of the purposed Pan-American railway.

The Peruvian Department of Commerce has rejected an application for the registration of the trade-mark "Red Cross." The reason is the resemblance to the international emblem of the Geneva Convention, which might cause confusion.

A new electric light and power company is to make extensive installations in the Mexican town of Durango, the motive power to be furnished from the mountain stream at El Salto, distant about 45 miles. The company represents United States interests.

BARON DE RIO BRANCO, on behalf of the Republic of Brazil, will present the International Bureau of the American Republics with a bronze bust of JOSÉ BONIFACIO DE ANDRADE E SILVA, a Brazilian statesman and patriot, to be placed in the new building of the Bureau in Washington.

A 100-ton smelter is to be erected at Temosachic, in the State of Chihuahua. The region to be served is one of the old and rich Mexican mining districts, which, through the building of the Mexico Northwestern Railway Company's branch, has been brought within 25 miles of rail transport.

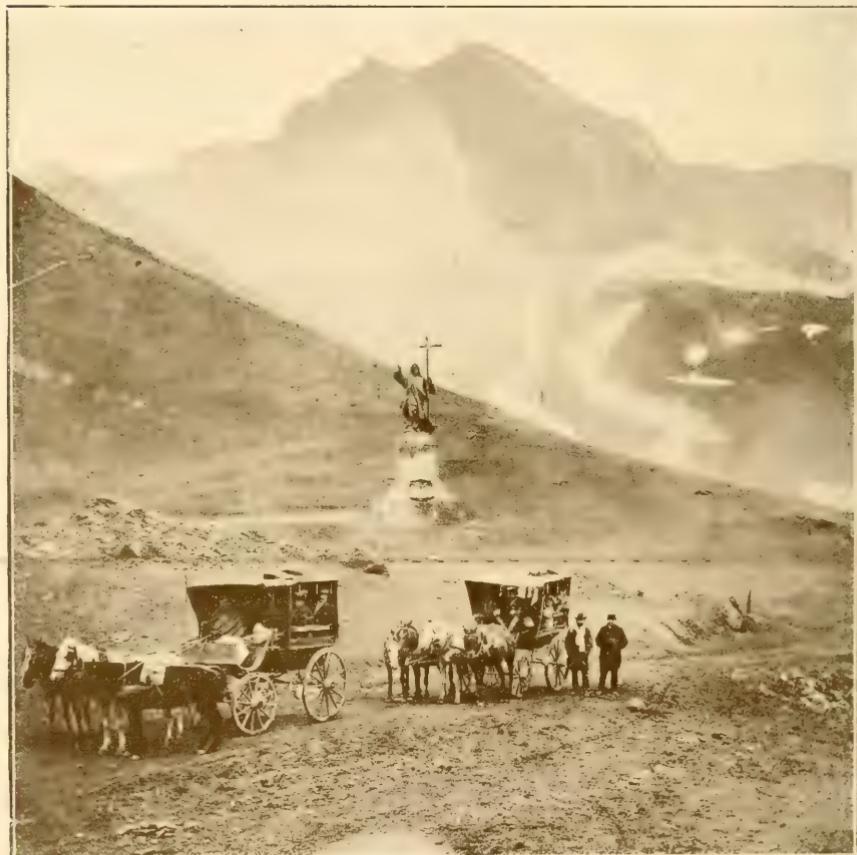
In the experimental station connected with the Department of Agriculture in Chile 30 varieties of wheat are being tested, 40 varieties of forage plants, 20 varieties of industrial plants, 22 varieties of potatoes, and 15 varieties of corn. The best grades are to be distributed throughout the farming districts.

All the contracts have been signed for the construction of the pavilions for the Argentine Industrial Exhibition to be held in Buenos Aires in 1910, and five pavilions of the Exhibition of Medicine and Hygiene, to occur at the same time, have been completed, work on the remainder advancing rapidly. The works for the first-named exhibition now contracted for are to cost \$300,000 American currency, and will cover about 20,000 square yards of land, with as much more for gardens, etc.

The new national library built by the Brazilian Government during the incumbency of Gen. SOUZA AGUIAR as Prefect of the Federal District is markedly American in the character of its architecture and fittings. General AGUIAR was commissioner for Brazil at the world's fairs at Chicago and St. Louis and applied the principles which so largely accounted for the structural beauty of the public buildings at those expositions. The book stacks and files have a capacity of over 1,000,000 books and pamphlets.

THE INTERNATIONAL SIG- NIFICANCE OF THE AN- DEAN TUNNEL

ON the mountain frontier, between the Argentine Republic and Chile, nearly 13,000 feet above the level of the sea, at Cumbre Pass, is a piece of statuary absolutely unique in history, "The Christ of the Andes." Cast in the bronze from the cannon of opposing Chileans and Argentines, it was placed



CHRIST OF THE ANDES AT CUMBRE PASS.

No shrine of the Old World has more significance than this bronze statue of the Christ, standing on the mountain boundary between two Republics as a symbol of the abiding peace to be maintained by the Argentine Republic and Chile in their mutual intercourse. Though the new tunnel route may offer greater facilities of travel, there will always exist the "passionate pilgrim" who will gladly bear some discomforts to visit this unique bronze cast from the cannon of opposing nations.

on the boundary line of the two nations in March, 1904, as a symbol of the perpetual peace which should thenceforth obtain between them. It stands a colossal figure 26 feet in height, placed on a gigantic column surmounted by a globe on which the configuration of the earth is outlined. One hand holds a cross and the other is extended in blessing.



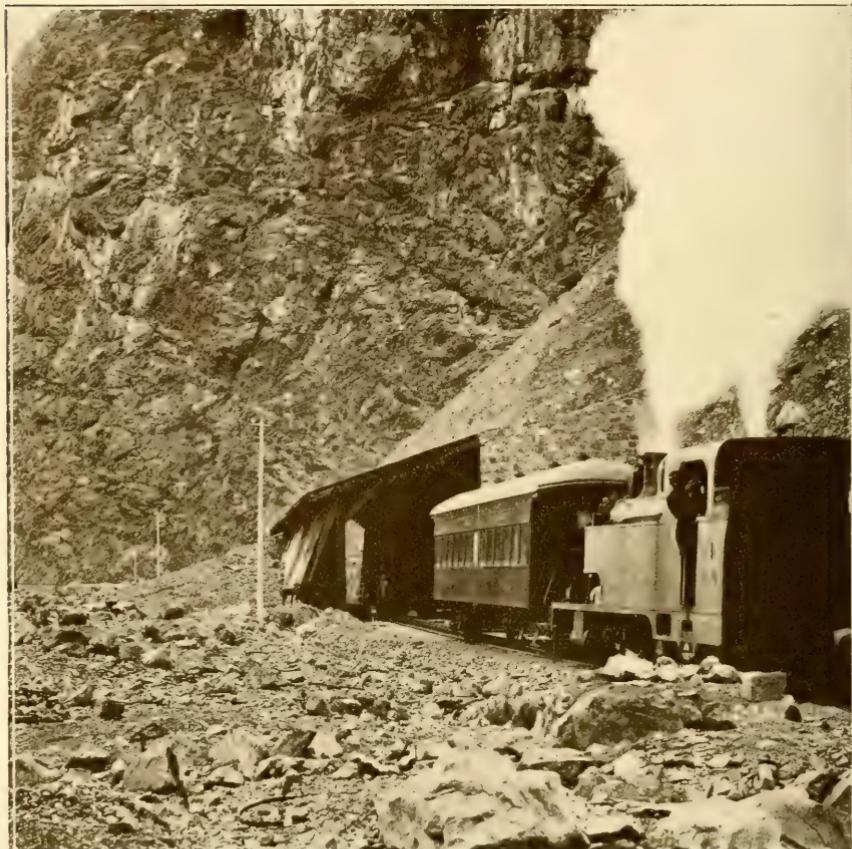
A MOUNTAIN SCENE ON THE TRANSANDINE RAILWAY.

Although much of the mountain travel will be eliminated by the passage through the mountain by means of the new tunnel, the Cordillera route will still afford unsurpassed views of snowclad heights, smiling valleys, and precipitous gorges—a constantly changing panorama of picturesque beauty.

ing. At the base are two tablets, one inscribed with the history of the monument and the other bearing in Spanish the following legend:

Sooner shall these mountains crumble into dust than the people of Argentina and Chile break the peace to which they have pledged themselves at the feet of Christ the Redeemer.

Scarcely less potent than treaties and tributes to the Prince of Peace for the maintenance of harmony between the native will be the fulfillment of the dream long cherished by engineers of piercing the Andes, which was accomplished on the morning of November 27, 1909, when the workmen of the Transandine Railway, approaching from opposite sides of the tunnel, faced the last thin line of rock



AVALANCHE SHED, TRANSANDINE RAILROAD.

Portions of the mountainous sections of the road are exposed to possible destruction by landslides and avalanches of snow. After severe storms great quantities of mud, softened by the rain, slip down the mountain sides to the track, causing delays and much damage. The sheds serve as a protection by carrying the débris over the track.

which, in the heart of the Andes, separated Chile from the Argentine Republic.

It was an Italian workman, operating under a British engineer in the employ of an Anglo-American firm, and carrying to fruition the project of two Chilean brothers, who placed the fuse for the demolition of the rocky barrier and opened up a line of communication which, in the opinion of a leading journal of the United States, "is

likely to change political relations in South America and commercial conditions throughout the world."

The first man to traverse the tunnel from end to end was the chief of the Argentine section of workmen followed by ninety of his operatives (mostly Chileans), who returned to their native land with banners flying and patriotic cries of victory.

From the capitals of Chile and the Argentine Republic functionaries and private individuals journeyed to be present at this last act in an undertaking which has engaged the talents of a succession of engineers and financiers since 1860 and which, upon completion, will take rank with the great Alpine tunnels.



USPALLATA STATION ON THE ARGENTINE SLOPE OF THE ANDES.

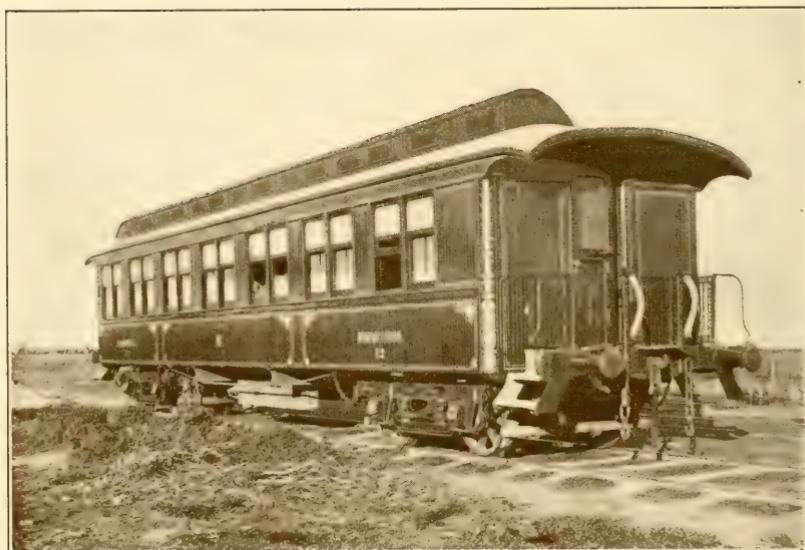
This station lies 5,600 feet above sea level, about midway between the thriving pampas town of Mendoza and the Argentine entrance to the Andean tunnel at Las Cuevas.

Fifty years ago the North American captain of industry, **WILLIAM WHEELWRIGHT**, prepared a tentative plan for crossing the continent from Rosario in the Argentine Republic to the Chilean port of Caldera, over the Pass of San Francisco. Thirteen years later the Chilean brothers, **JUAN** and **MATEO CLARK**, to whom the credit for the project of the line as completed must be awarded, took the first practical steps in the matter through a concession obtained from the Argentine Government for a railroad from Buenos Aires to the Chilean frontier.

In 1880 the first section from Villa Mercedes to Mendoza was built by the Argentine Government, connecting with the Clark line from

Buenos Aires to Villa Mercedes, in all 650 miles. A subsequent concession to a British company secured the construction of the road from Mendoza to the Chilean frontier and thence to the Chilean town of Los Andes (160 miles), where connection would be made with the existing line to Valparaiso, 78 miles in extent, making a transcontinental line 888 miles in length.

It was the trans-Andean section between Mendoza and Los Andes which presented the greatest difficulties, for here lay the old pack route over Cumbre Pass, 12,605 feet above sea-level, which modern engineering had decided to eliminate by tunneling the mountain 2,500 feet lower down.



SLEEPING CAR IN THE TRANSANDINE SERVICE.

It is intended that the new train service of the Trans-Andine line between Buenos Aires and Valparaiso shall cover the route in a day and a half. Commodious sleeping cars form part of the equipment and are supplied with all the facilities for luxurious travel.

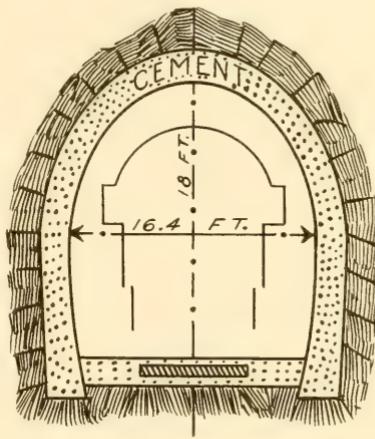
At Caracoles, on the Chilean slope, and at Las Cuevas, on the Argentine side, men and machinery entered the mountain for a final conquest of nature. Hollowed out of solid rock, the gallery as opened is 10,460 feet above sea-level, 3,165 meters in length, $5\frac{1}{2}$ meters in height, and 5 meters wide, being located about 1,000 meters below the crest of the Andes. The Chilean section covers 1,385 meters and the Argentine 1,782, the completed work being estimated at a cost of £500,000.

The tunnel is made to the same dimensions as the Simplon and is therefore large enough to allow locomotives, carriages, or trucks that are run on a 5 foot 6 inch gauge to pass through it. It is straight

throughout, except for 120 yards at the eastern entrance where there is a curve of 219 yards radius.

Much work still remains to be done before trains will be running over the route, but it is proposed that communication shall be established by May 25, 1910, thus affording a most appropriate and adequate celebration of the centenary of the revolution which gave to both nations their independent life. It will undoubtedly be utilized in the official exchange of visits between the executives of Chile and the Argentine Republic, which have been arranged as a feature of the centennial year.

The immense practical value of the new route is shown by the state-



CROSS SECTION OF THE TUNNEL THROUGH THE ANDES.

Like the Simplon tunnel, it has a 5 foot 6 inch gauge. In length it is exceeded by the latter, which is $12\frac{1}{2}$ miles, and by other well-known railroad tunnels, such as the Alberg, which extends through the Alps, $6\frac{1}{2}$ miles; the Hoosac, in the Hoosac Mountains, Massachusetts, $4\frac{1}{2}$ miles; the Mount Cenis, between Italy and France, 8 miles; and the St. Gothard in Switzerland, $9\frac{1}{2}$ miles.



ENTRANCE TO THE TUNNEL AT LAS CUEVAS.

Las Cuevas marks the entrance to the trans-Andean tunnel on the Argentine side and to this point, on November 27, 1909, Chilean and Argentine dignitaries and civilians journeyed to celebrate the piercing of the Andes, meeting the Chilean committee, which entered at Caracoles, on the opposite side of the mountain.

ment that the time for the trip from Valparaiso to Buenos Aires will be reduced to thirty-four or thirty-five hours, thus facilitating the transport of passengers and of perishable merchandise. While the romantic aspects of the journey will be greatly reduced, the saving of time and the greater ease of travel will more than atone for the loss.

The picturesque mountain pass and the stage trip between railway terminals will be superseded by a continuous all-rail journey from ocean to ocean in a day and a half.

So long as the chief exports of the countries interested continue to be raw materials no great changes may be expected in the character of products transported to the seaboard, though the volume will inevitably be greatly augmented. Argentine grains, hides, and beef, and Chilean copper and nitrates, will continue to be sent abroad by the sea, but in the development of a greater commercial volume between the countries of the east and west coasts of South America and in the transport of lighter manufactured goods from Europe and America the rail route will prove a formidable rival.

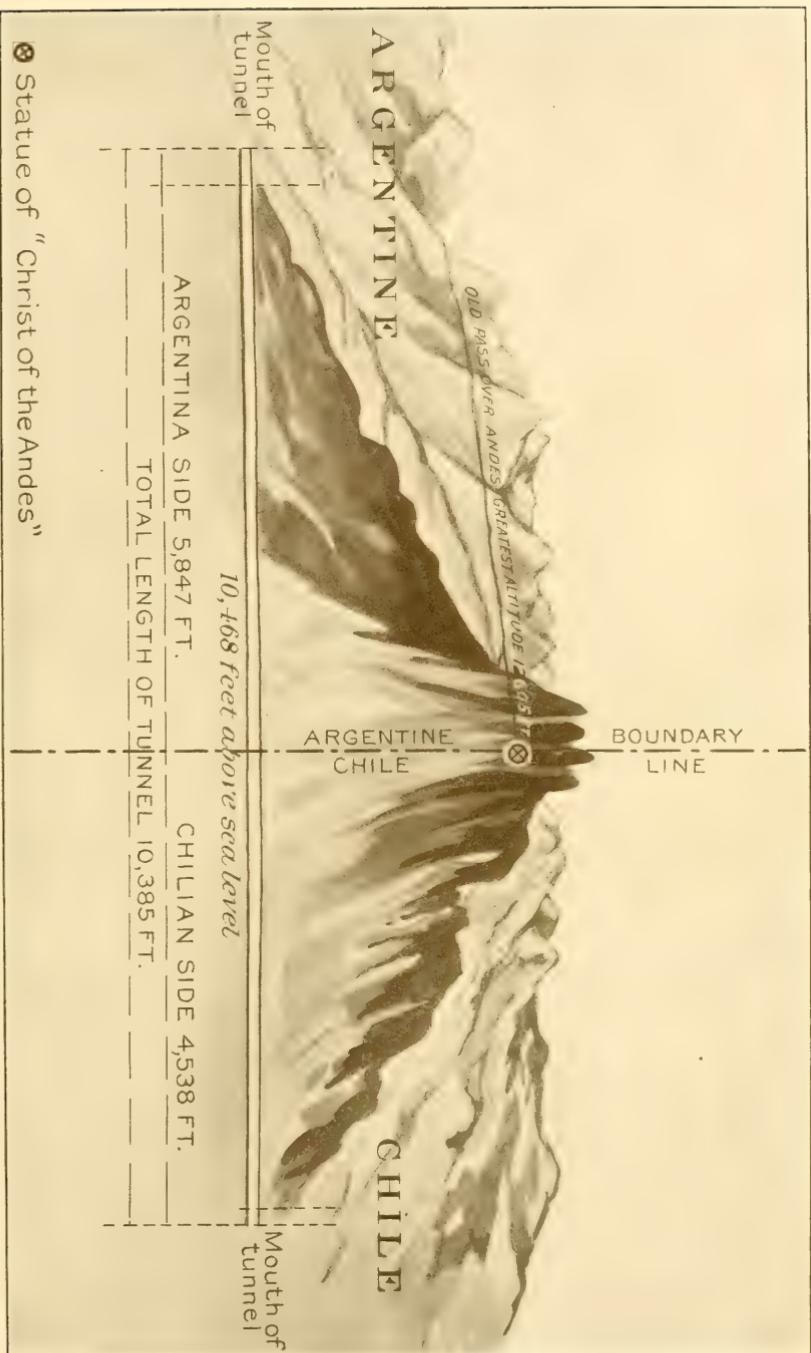
Though Brazil and the Argentine Republic are washed by the Atlantic, vast tracts of rubber-growing districts of the one and of the agricultural and cattle sections of the other lie far nearer to the Pacific. With facilities of transport it is reasonable to suppose that products which have hitherto found their sole ports of shipment on the Atlantic seaboard will ultimately turn to the Pacific, and vice versa.

THE ITALIAN WORKMAN WHO PIERCED THE ANDES.

Felipe Fascio, an Italian, who, aided by Hermínio Cortés, his Chilean aid, placed the fuse for the final penetration of the great Cordillera of the Andes, has been the principal operator in many similar scenes. He has worked in the Alpine tunnels, and has for many years been employed in South America in enterprises where skill and daring were required to overcome the barriers of nature. With his family he has occupied a small cottage near the scene of his labors as drill man in the service of the railway contracting company.

As a medium of ocean traffic the importance of the route can not be overestimated. At present South America is to a great extent a commercial appanage of Europe. On the east coast the trade of the United States with the countries of the Atlantic has been handicapped by inadequate shipping, and also by the fact that the east coast





⑧ Statue of "Christ of the Andes"

PROFILE OF THE TRANS-ANDEAN TUNNEL OPENED BETWEEN CHILE AND THE ARGENTINE REPUBLIC ON NOVEMBER 27, 1909.
 Although only about 2 miles long and surpassed in this respect by others in various parts of the world, it is unique in that no tunnel of as great a length is situated at so great a height above the level of the sea.

to the south of the turn of the continent is really much nearer to Europe than to the United States with the added advantage of more favorable sailing conditions, and the west coast is as remote by sea from New York as it is from Liverpool or Hamburg. When the Panama Canal is completed a different condition will prevail. Then the United States, especially its manufacturing sections, will enjoy a tremendous advantage in respect to all that portion of South America situated on or commercially tributary to the Pacific. Already the opening of the Tehuantepec line across Mexico and of the interoceanic route in Guatemala has augmented the volume of trade between the Atlantic and Pacific.

With the Buenos Aires-Valparaiso route open to easy transport, Chile and Peru will no longer be cut off from the great streams of the world's commerce. They will be in direct and constant intercourse with the countries to the east and will be brought proportionately closer to Europe, and a long step will be taken toward South American solidarity by bringing the capitals of the west coast under the same influences as those of the east.



LATIN AMERICA IN PAN-AMERICAN CIVILIZATION.

THE twenty-fifth annual meeting of the American Historical Association, held in New York, December 27-31, 1909, devoted its morning session of the 31st to a conference on the "Contribution of the romance nations to the history of America," with Dr. W. R. Shepherd, of Columbia University, as chairman.

The contribution of Spain was discussed by the distinguished representative of the Oviedo University, Spain, Dr. R. ALTAMIRA, who has recently made a tour of Latin America, marked by enthusiastic and appreciative receptions.

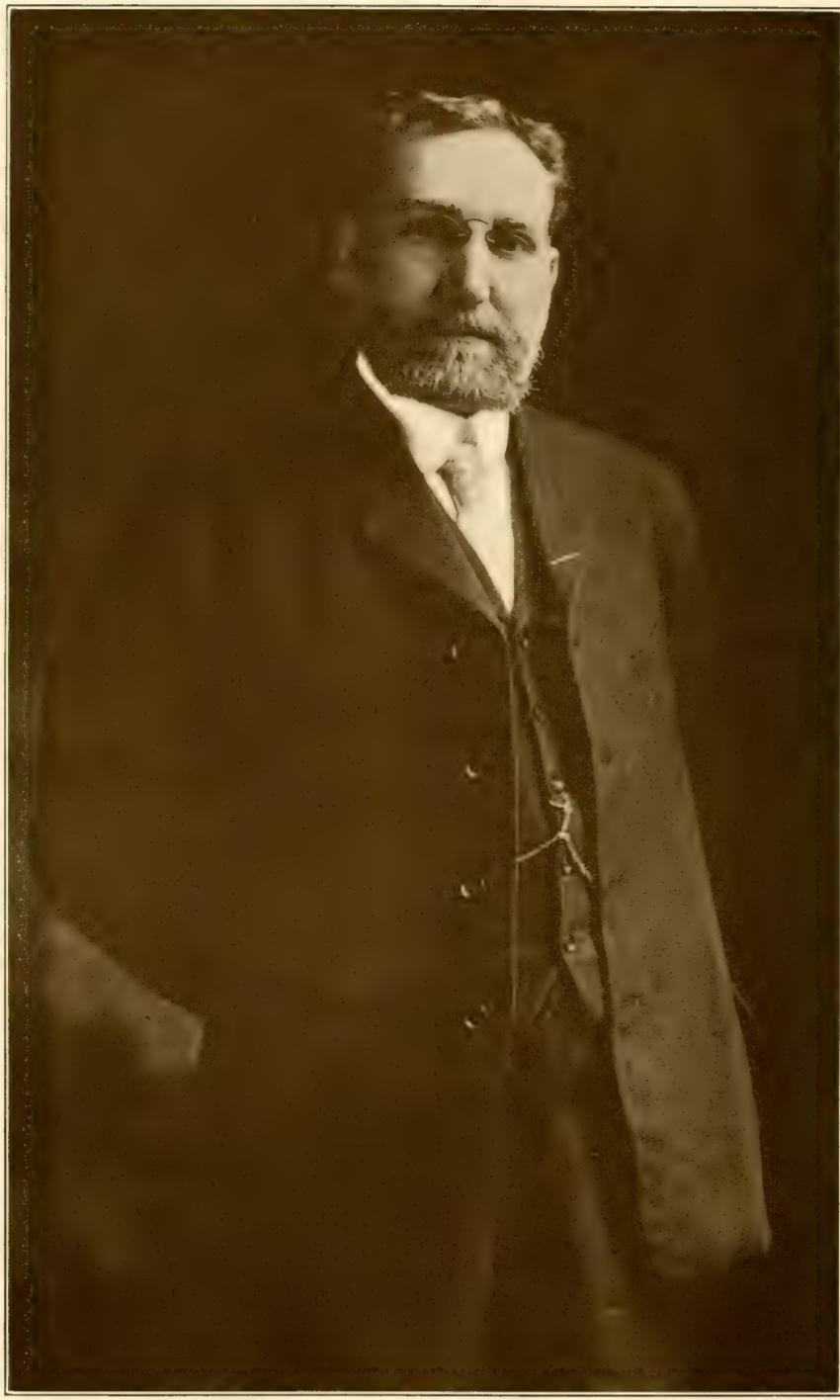
The contribution of France formed the subject of Dr. R. G. THWAITES's paper, representing the University of Wisconsin, and Portugal's participation received laudatory comment on the part of Dr. HIRAM BINGHAM, of Yale University.

Mr. FRANCISCO J. YÁNES, the Secretary of the International Bureau of the American Republics, spoke in regard to the contribution of the nations of Latin America to the general civilization of the Western Hemisphere. By reason of his long service in the interests of the American Union, and through his wide knowledge of the best thought of Latin America, Mr. YÁNES is eminently qualified for an adequate treatment of so important a subject. His paper is therefore reproduced in full as an authoritative exposition of a most interesting topic.

First of all, I must thank Professor SHERPERD for extending to me the privilege of addressing you on a subject very dear to my heart. The task is not an easy one, as I am asked to condense into the space of twenty minutes, at the outside, the history of 20 Latin-American Republics, or one country a minute, which would be quite out of proportion to the size of some of those nations, or the achievements of others since their independence.

Of course, I know that I could further condense the matter and dismiss the subject by simply stating that the contribution of the Latin-American Republics to civilization and to the history of America has been no other since their independence than a continued series of revolutions. Yes, we have had revolutions of all kinds, upon the slightest provocation, to the point of having made a fine art of that gift, and incidentally the means of support of nearly 75,000,000 people.

But while this seems to be the universal opinion of those better acquainted with our own social evolution than we Latin Americans are, and of those who derive their knowledge of current events from sensational reports, the truth of the matter is that in some unaccountable way the Latin-American Republics have managed to advance to a remarkable degree of civilization between fights



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MR. FRANCISCO J. YÁÑES,
Secretary of the International Bureau of American Republics.

You have just heard from the distinguished professors who have preceded me how Latin America was colonized by the Spaniards, Portuguese, and French, and how these pioneer nations have left their imprint on our civilization and social structure. It is now my pleasant duty to show you, in a general way, what we have done with the trust our forefathers left in our charge, and whether we have succeeded or not in our efforts to keep pace with the progress of the world.

You well know that 17 out of the 20 Latin-American Republics are contained in that enormous unbroken mass extending from south of the Rio Grande down to Cape Horn, the other independent States completing the score being Cuba, Haiti, and the Dominican Republic in the Caribbean Sea. You also know that Latin America consists of the countries originally founded by the Spaniards, 18 in all, where the mother tongue is Spanish; of Brazil, the largest single country of Latin America, in fact larger than the United States proper, a country of Portuguese origin speaking that language; and of Haiti, French of origin and tongue, which shares with the Dominican Republic, of Spanish descent, the old Hispaniola, where Columbus founded the first city in the New World and where his remains lie in the Cathedral of Santo Domingo City.

The majority of the Spanish-American countries attained their independence between 1804 and 1825, and their struggle for freedom, if encouraged by the example of the United States, found inspiration in French ideals, adopted and defended with Spanish courage. Once free from colonial bondage, the new Republics had to deal with fresh problems arising from changed conditions. The new political entities commenced their independent life heavily handicapped, on the one hand by their economic conditions after a period of protracted wars, the history of which registers acts of valor and heroic deeds hardly to be surpassed in the annals of any modern nation, and on the other hand by scarcity of population and, though paradoxical, nevertheless true, the fertility of the soil and most favorable climatic conditions. The unbounded productiveness of Latin America, coupled with the modest wants of the masses, is the main cause of the slow development of our countries as manufacturing centers, our chief means of support being agriculture and allied industries and mining.

The leading classes, black-slave owners and landlords to the Indian tenantry, lived for the most part in relative ease after the war of independence, and those among them who did not seek in the army a field for their activities or inclinations devoted themselves to intellectual and scientific pursuits, either in civil life or in the service of the church. Some went abroad, to France or Spain preferably, to acquire a general education or to perfect that received at home, and to see the world, bringing on their return new ideas which were eventually adopted and more or less modified as necessity demanded. To satisfy this longing for education, colleges and universities were founded, generally under the direction of some scholarly friar or Roman Catholic priest, until now there is not one single State in Latin America that can not boast of institutions of learning worthy of note and respect and learned men who can compete with any other men of letters whatever their nationality or their calling. Laic education is at present universal in Latin America.

Until a few years ago the masses were analphabet, but now, due to legislation making primary public education compulsory, the number of those not able to read and write has decreased during the last ten or fifteen years to a satisfactory percentage. Our colleges and universities have produced in the past, and are daily producing, statesmen, lawyers, physicians, mathematicians, and, in short, men of intellectual attainments and force, well trained and equipped to shine in whatever profession they may choose to adopt. A further proof of

the interest shown by most of our Latin-American governments in the education of their people can be found in the number of Latin-American students in the United States supported by their respective governments, at least 200, not counting, of course, those who are paying for their own education.

A charge frequently made against Latin Americans, and undoubtedly true, is that we are a race of dreamers, poets, literati, and sundry other gentle names meaning, politely, idlers, unfit for the hard things of life. Quite so. We inherited from our forefathers the love of the beautiful and the grand; the facility for expression and the vivid imagination of our race; from them we inherited the sonorous, majestic Spanish, the flexible, musical Portuguese, and the French, the language of art, and a responsive chord to all that thrills, be it color, harmony, or mental imagery; we inherited their varying moods, their noble traits, and their shortcomings, all of which we have preserved, and in certain cases improved, under the influence of our environments, our majestic mountains, our primeval forests, the ever-blooming tropical flowers, the birds of sweetest wild songs and wonderful plumage; under magnificent skies and the inspiration taken from other poets and writers, be they foreign or native, who have gone through life like the minstrels of old, with a song on their lips and an unsatisfied yearning in their hearts. And in this connection let me ask you a question: Are there many among you that can give the names of two or three Latin-American poets or writers? LONGFELLOW and POE, J. FENIMORE COOPER and HUGH CONWAY, among other American poets and writers of fiction, are as well known in Latin America as in the United States. They have been read in their original tongue and translated by some of our foremost literary men.

The study of modern languages is obligatory in all of the universities and colleges of Latin America, and necessary to obtain certain academic degrees. French was for a long time the language chosen by the majority of the students, hence the influence of French literature and French thought in Latin America. German was taken up by many, more as a commercial tongue than otherwise; but even so, German literature, particularly the works of GOETHE, SCHILLER, and HEINE, is well known in Latin America. English was preferred by others, rather as an accomplishment than as a language of immediate practical use, until now it has taken in many cases the place of German. These two languages have followed the trend of trade, but English is becoming more useful every day in view of the increased relations of Latin America with the United States, due to better transportation facilities as well as to other reasons both industrial and political in character.

The artistic temperament of the Latin American has found expression in more than one painting, statue, or musical composition. We have painters and sculptors of renown whose works have been admired, rewarded, and commended in the leading art centers of the world, and in all the countries there are art schools from which the students go preferably to Italy or France, most frequently pensioned by the Government, to perfect themselves and do honor to their motherland. We have musicians wedded to their art and a credit to the country and to themselves; and composers, singers, and players educated in our own conservatories or schools. At this point I desire to call your attention to a fact that may have escaped your observation, and that is that since the Spanish war and the occupation by the United States of Cuba and Porto Rico Spanish music has had such an influence in the popular works of American composers that even in the characteristic "rag time" as well as in other melodies the traces of the Cuban *tangos* and *guarachas* and the Porto Rican *danzas* and *danzones* are quite marked. We have theaters and opera houses

not surpassed by any others in America or Europe, and the Governments of many, if not all, of the Latin-American countries contribute to the education of the people by subsidizing opera troupes every season or so, paying heavy sums to obtain the best singers. Many a celebrity who has come to New York has commenced his career in Latin America.

But this is not all. Intellectual or artistic development is not the only claim Latin America has to the respect of the world, nor the only effort made to keep abreast of the times, even under most trying circumstances. The evidences of an earnest desire to advance and to attain that degree of civilization that would make us real factors in the progress of the human race and the betterment of the world are numerous in all the spheres or fields of man's activities. Education brought with it the knowledge of the older countries and different civilizations, improvements began to be studied and adapted as circumstances allowed, and means of communication with the outer world became a necessity. Their development followed the increase of trade, affording facilities for traveling and learning first-hand what Europe or the United States had to offer in the way of improvements for the comforts of life and the necessities of an advancing commerce.

Trade was the spur that urged the merchant to seek facilities for bringing to the principal markets the products of the interior, the raw material which Latin America sends out to be exchanged for manufactured goods; commercial and banking facilities were established with the countries trading with us, railroads began to be built, steamship lines to run between our ports and those of foreign lands, until now we have in the 20 countries of Latin America a commerce amounting to over \$2,000,000,000, of which the share of the United States is about \$560,000,000; we have nearly 55,000 miles of railways in operation in about 9,000,000 square miles, the leading countries in this respect being Argentina, Mexico, Brazil, Cuba, Chile, Peru, and Uruguay, in the order given, followed in the same order by Venezuela, Guatemala, Colombia, Bolivia, Costa Rica, Ecuador, Nicaragua, Paraguay, Dominican Republic, Honduras, Salvador, Haiti, and Panama. Topographical conditions and scarcity of population are the main causes that have retarded railway development hitherto, but notwithstanding these drawbacks railway construction continues steadily, bringing with each new length of rail a new element of civilization, and opening a new field for human activities.

There is not a city of any importance in Latin America where either artificial illuminating gas or electric light is unknown. Telegraph and telephone wires stretch over all Latin America, uniting cities and towns, over the wilds and across the mountains, bridging powerful rivers, connecting neighboring countries and linking our shores with the rest of the civilized world. Not an event of any importance takes place in Europe, Asia, Africa, or the United States, not to mention our Latin American sisters, that the submarine cable does not bring to our Governments or newspaper offices, to be made public either in the form of bulletins or in "extras," according to the magnitude of the event. Electric cars are fast replacing the older and slower methods of transportation within the cities and extending their usefulness to carrying passengers to suburban villas, small towns, or country places of amusement.

I have just referred to the Latin American public press, which represents another phase of our civilization. A newspaper in Latin America, with the exception of political sheets devoted to keeping the fire of discord burning, is an institution founded not only for commercial gain, but to represent or to defend an idea, a moral or political issue, affecting the general interests of the country. These papers are the leaders of public opinion generally, and, in order

to maintain their popularity and the good will of the serious minded responsible readers, reject all that savors of scandal. Private life is respected, the home is sacred, and whoever collaborates in the paper, be it regular reporters or correspondents, are made morally and legally responsible for their utterances.

Another most important step is the sanitation of ports that for years, I may say for centuries, have been hotbeds of disease and breeders of yellow fever and other pestilential maladies. Most of these places are to-day as free from the dreaded scourge as those southern ports of the United States which were once classed among the unhealthy places of the world. In the majority of cases all credit is due, in this connection, to the efforts and intelligence of Latin American physicians, supported by the respective Governments. The work against the white plague goes on in every Latin American hospital or sanatorium with as much care as in similar institutions in the United States, subject, of course, in certain cases to the relative prosperity of each country. Latin American hospitals can compete with the best institutions of Europe or this country, whether in point of equipment or ability and learning of their surgeons and assistants.

There is another aspect of Latin American civilization which deserves more than passing attention. It is their political life as members of the Pan-American fraternity of independent nations. Their first step toward higher ideals was their declaration of independence and their assuming the duties and exercising the rights of sovereign states. The transition of colonial dependencies to self-governing nations was fraught with difficulties unknown to the citizens of the original 13 States of the North American Union, whose constitution was adopted in the main as a model for our own republican institutions. After a period of evolution—or, if you prefer it, revolutions—during which the several antagonistic interests were undergoing a process of amalgamation, or, better still, clarification, there now exist in the majority of Latin American countries stable governments whose sole aim is to maintain above reproach the moral as well as the economic credit of their respective nations, so as to attract foreign capital and energy, which will stimulate the development of home industries and insure peace, prosperity, and happiness to its citizens. Other countries have been less fortunate, but every disturbance, every civil strife, has been a misdirected effort toward the attainment of a goal dreamed of by all and by all desired. Public education, foreign commerce, improved means of communication, greater development of the natural richness of those countries are factors which have contributed and are constantly contributing to the establishment of a peaceful era which will eventually become normal and stable.

Nothing shows better this spirit of progress than the maintenance in the city of Washington by all the countries of our American Hemisphere of a unique institution called the International Bureau of the American Republics, the living embodiment of the idea which created the International Union of American Republics as a result of the First Pan-American Conference, which was held in Washington nearly twenty years ago at the invitation of that great American statesman, JAMES G. BLAINE. The Bureau represents the spirit of progress, the desire for commercial advancement, the necessity for stronger friendly ties, felt among the Republics of the three Americas, by making them known to one another, by bringing to the attention of the American people the opportunities offered by the Latin American countries, their civilization, their onward march toward prosperity, united in a single purpose of material and moral advancement.

Much more could be said to show our constant endeavor to cooperate with our best efforts to the civilization of the American Hemisphere. We have contributed readily according to our Latin standards, and from the day of our independence and the establishment of our republican constitutions we have recognized the rights of man, abolished slavery, fostered education, developed our commerce and increased our traveling facilities and means of communication with the outer world. We have contributed to the best of our ability to the sum total of human betterment, and the day can not be far distant when full justice will be done to the efforts of the countries south of the United States, where live a people intelligent, progressive, proud of their history, and ready to extend a friendly hand and a sincere welcome to those who are willing to help them in further developing their resources.



LATIN-AMERICAN MUNICIPALITIES

GUATEMALA CITY.

IN the United States and Europe people are inclined to take for granted as a fact something that is not a fact at all—that is, that the Spanish-American cities, most of them being located in the Tropics, have the climatic conditions of heat and excessive humidity usually included in a conception of the Tropics, and that these conditions render a residence for any extended period more or less impossible, and always dangerous to people of the Northern European races.



COLON THEATER, GUATEMALA CITY, GUATEMALA.

Colon Theater, in the city of Guatemala, is surrounded by lovely gardens containing beautiful subtropical flowers and shrubs. It occupies a commanding position and is one of the notable edifices of the metropolis. This theater is well furnished, lighted, and ventilated, is provided with all modern conveniences, and is one of the most artistic and attractive theaters in the Americas.

This belief is founded upon an entire misconception of the facts as to most of these cities and a more than probable misapplication of facts to the few cities, like Havana, Santo Domingo, and Panama, where tropical conditions, although not such as are most often pictured, do in truth exist.

For the others, in all the capital cities of Spanish America from the Rio Grande to Cape Horn, there exists not one that presents any

aspect whatever that tallies with the popular conception in the United States and Europe of what a tropical city is.

This does not mean that in Central and South America there are no lands comparable with the Kongo and southern India. These lands do exist from Mexico south to Paraguay. These are the *tierras calientes*, but the earlier settlers did not build their cities in the hot lands. They went back into the interior among the mountains and there chose the most healthy and salubrious spot they were able to find. The question of accessibility was in many cases, in fact in most cases, subordinated or entirely lost sight of in the search for favorable climatic conditions.

This characteristic of the early Spanish settlers is in marked contrast with the custom of the early English settlers in North America and of the Portuguese in Brazil. In the English and Portuguese settlements cities sprung up apparently without forethought. In fact, there was no set purpose at the beginning that on this or that spot a city should be built. People came and settled because the point was accessible and answered the immediate needs of the settlers. Naturally, these points were those where the best harbor lay and where there were the best natural facilities for communication. It was because of these conditions that the English and Portuguese cities of America grew, and not because of any preconceived intention of government or individual. In the Spanish colonies of America it was entirely otherwise. The site for a city to be the capital of the province was chosen generally by the leader of the first band of military adventurers who was able to penetrate the country, and the plan of the city was drawn before a house was erected. But the spot was not chosen at haphazard nor with much regard to the suitability for defense against the natives. The one primary consideration seemed to have been favorable climatic conditions. Even the matter of accessibility to the seacoast was entirely lost sight of in such capitals as Bogota, Quito, and La Paz. In fact, where considerations of defense were considered, it was defense against the buccaneers and freebooters of the Spanish Main, and inaccessibility lent added security as against these.

On rare occasions it was found necessary on account of some condition not foreseen or not adequately weighed to change the original location of the capital city. This was done in Guatemala. The present capital, Guatemala City, is about 35 miles away from the site of the old capital founded by ALVARADO in 1524.

The Central American republics, including Panama, occupy the land bridge between the North and South American continents. This bridge extends from the Gulf of Honduras to the Gulf of Darien and joins Mexico to Colombia. Guatemala laps over into North America proper. The whole of this territory except Panama is very



PANORAMIC VIEW OF GUATEMALA CITY.

The capital city of the Republic is situated in a rich and spacious plain at an altitude of 4,850 feet above sea level. The houses are largely built of one story on account of the prevalence of earthquakes, and consequently the city covers a large area of ground. Among the many prominent buildings it contains are a cathedral, university, polytechnic college, museum, public libraries, hospitals, theater, bull ring, etc.

mountainous, although the greatest heights occur among the mountains of Guatemala and Costa Rica. In Panama the mountains fade away into a low line of hills. In Guatemala three orographic zones are distinguished—the northern hilly plain of Peten; the mountain chain of Central Guatemala, rising at points to nearly 13,000 feet; and the massive range of southern Guatemala, covering a larger area than the central chain and attaining greater heights. In the southern ridge of this range there are enormous volcanoes, the highest being Tajumulco, 13,814 feet; Tacana, 13,334 feet, and Acatanango, 12,992 feet. Most of the volcanoes in Guatemala are extinct, but



STREET DECORATIONS IN GUATEMALA CITY ON A HOLIDAY.

during historic times eruptions have occurred in Tacana, Cerro Quemado, Luego, and Pacaya.

The city of Guatemala is in the southern Cordillera, variously computed as from about 4,800 to over 5,000 feet above sea level. It is 84 miles inland by rail from the Pacific port of San Jose and about three times this distance from the Atlantic coast. The average temperature for the year is about 72° F. The extreme variation is ordinarily within 20°, although it may reach 25° in some years. That is to say, the temperature rarely falls in any year below 65° F. in the so-called "winter," nor rises above 85° in summer. The annual rainfall is 57 inches.

Most of the Spanish-American capitals have an agreeable climate, but none surpasses Guatemala, if indeed there is any spot in the

American continent that does surpass it in this respect. It is not so cool as Quito or La Paz, nor even Mexico City, but then visitors from the United States often find these cities too cool on account of what to them seems insufficient house heating. Americans complain of the same thing in Italy, but in Guatemala City not even the parboiled American feels the need of a fire either morning or evening. On the other hand, the heat is never oppressive. The climate of Guatemala City can scarcely be called that of perpetual spring; this term would be better applied to the climate of Bogota; the climate of Guatemala City is rather that of a perpetual mild summer.

CORTES, after the conquest of the Aztec kingdom of Mexico, sent his ablest lieutenant, PEDRO DE ALVARADO, in 1522, to complete the subjugation of the country to the south. This having been accomplished, ALVARADO heard of the rich and powerful Maya-Quiché kingdom of Guatemala, still farther to the south. With a few hundred Spanish soldiers and a large body of allied Indians, and through dissent among the Quichés themselves, ALVARADO was able to overthrow the Quichés and other tribes of the territory now included in the Republics of Guatemala, Salvador, and part of Honduras.

At once, as was the Spanish custom, he set about choosing a site and founding a city to be the capital of the newly conquered country. This site was chosen high up in the southern Cordillera, and was named by him the city of St. James (Santiago) of Guatemala, because the day on which it was founded was St. James's day, July 25, in the year 1524. In 1532, the EMPEROR CHARLES V conferred upon the city a coat of arms, and in the year following the city was raised to a bishopric, although the first bishop, FRANCISCO MARROQUIN, was not consecrated until the year 1537 in the City of Mexico.

The city was situated in close proximity to two volcanic mountains called "Fuego" and "Agua" (Fire and Water); in fact, it was directly under Agua. In September of the year 1541, which month was exceptional for the heavy rainfall, a terrible catastrophe overtook the inhabitants. A heavy rain fell all during the 8th and 9th of the month and into the 10th, which was Saturday. About 8 or 9 o'clock of this day there descended upon the doomed city an overwhelming torrent of water, carrying immense quantities of stones and sand, which buried the city and destroyed the greater part of the inhabitants, including 600 Spaniards, among them the wife of ALVARADO, and thousands of the natives. After the fall of the waters it was seen that the city was destroyed. The Spaniards abandoned the site and at once began search for another.

On October 22, about six weeks after the destruction of the first capital, the site of the new capital was chosen, about 3 miles away, in the valley of Tuerto. The building of the new city actually began the next year, in 1542. It was built near the foot of Fuego, the



STATUE OF GENERAL MIGUEL GARCÍA GRANADOS, EX-PRESIDENT OF GUATEMALA.

This bronze statue was erected on the Boulevard of the Reforma, City of Guatemala, in 1905, in commemoration of one of Guatemala's most progressive Chief Magistrates. General Granados entered the presidential office in 1870, and during his incumbency many economic reforms were instituted.

Mountain of Fire. In a few years it had far outstripped what the old city had been, and in 1566 PHILLIP II, as an evidence of distinguished favor, conferred upon it the title of "Very Noble and Very Loyal City of Santiago." It came in time to have a population of nearly 100,000 inhabitants and was the second city of America, but little behind Mexico. At the height of its prosperity, during the last half of the eighteenth century, it was destined to be destroyed as the older city had been destroyed, although by a different agency. Within less than twenty-five years after the new city was planned and the survivors of the terrible calamity that had befallen the first capital had removed such of their belongings as remained to them to the new capital, it, in turn, was menaced by earthquakes. Historians of the city enumerate earthquakes occurring in 1565, 1575, 1576, and 1577. On December 27, 1581, a great shower of volcanic ashes fell upon the city from Fuego. This again occurred in February, 1705. There were earthquakes in 1585, 1586, 1607, 1651, 1689, and 1717. All of these caused damage, particularly those of 1651 and 1717. On March 4, 1751, occurred the most terrible of all up to that time, when the city was left almost in ruins. Following this there were repeated earthquakes for twenty-two years, and this period was the beginning of the end; but the people did not desert the city. They rebuilt and repaired the old and erected new buildings, so that when the end came, as it did in 1773, the city of St. James of Gautemala, was more splendid than it was before the catastrophe of 1751.

From May to July of 1773 the city repeatedly trembled and shook, and the buildings began to show cracks, although few of them fell. The people, accustomed to these minor quakes, although not to such constant shaking, refused to leave their homes. Like the dwellers on Vesuvius, who from generation to generation for 3,000 years have built their homes upon its slopes, although from time to time with molten fire and burning ash it has wiped clean from its sides every trace of man and his work, yet as these people of Vesuvius have come to almost despise their awful man-killing mountain, so the people of Guatemala, living under the shadow of the Fire Mountain, had learned to disregard the rude tossings of their half slumbering monster.

At about 3.30 o'clock of the afternoon of July 29 there came a fierce quake that drove the inhabitants into the streets and threw down a few houses. In a few minutes, however, the shock not being repeated, many of the people returned to their houses and occupations, and then suddenly came the great upheaval. The city named for the patron saint of Spain, St. JAMES OF THE CAVALIERS, fell, as Messina has since fallen, a heap of ruins. There it lies to-day, the greatest ruined city of America, within sight of the mountain of



ESTRADA CABRERA ASYUUM, GUATEMALA CITY, GUATEMALA.

Recently completed and designed as a home for the indigent.

Fire and the other mountain of Water, from whose shoulders came down the flood that overwhelmed the first city.

The first city is called the old city. It is lost under the sand and stones, but in these rests a single modern building, a free school for girls. The second city is called the Ancient City, Antigua Guatemala, or simply Antigua. It is still a mass of ruins, but 10,000 people have since gone back to live among these ruins. They have quarried themselves homes here and there among the sculptured



TEMPLE OF MINERVA, GUATEMALA CITY, GUATEMALA.

On October 28, 1899, President Manuel Estrada published a decree setting apart the last Sunday in October of each year as a national holiday to celebrate the benefits of public instruction. The exercises and festivities are participated in by teachers, pupils, and the general public, and are held in temples erected and dedicated to this purpose throughout the Republic.

pillars and stones of the stately churches, public buildings, and residences that lie in a confused mass.

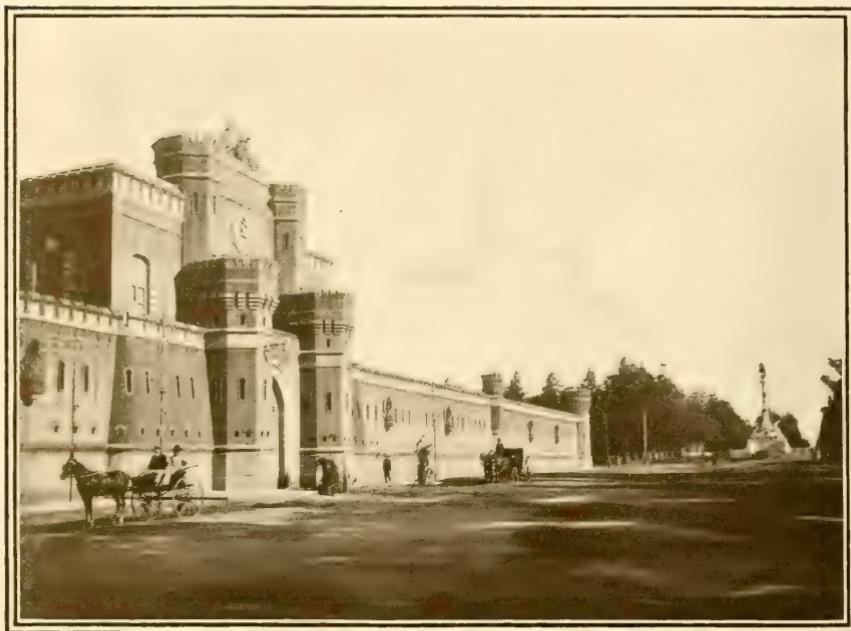
Such of the inhabitants of Antigua as remained alive after the awful calamity of 1773 moved nearly 30 miles away to the valley of Las Vacas and then began the building of the new city, the capital of to-day. It is laid out as are all Spanish American cities, in regular quadrilateral form with streets crossing at right angles. In the English settlements of North America, and this is in the main true of the



STATUE OF COLUMBUS, GUATEMALA CITY.

This celebrated monument of the Great Discoverer adorns Central Park. The artistic composition of the figures and the bronze globes is most happy, while this park, with its wealth of semi-tropical vegetation and its commanding and picturesque location, forms a fitting background.

Portuguese settlements of Brazil, streets grew from the roads or paths from house to house or from farm to farm, or even perhaps, as is said of Boston, they were at the first merely cow paths, but in Spanish America the town was laid out before the buildings were erected. The new Guatemala covers a large area of territory, much larger than is usual with cities of about the same population. This is due to the fact that the residences cover more ground space than in most other cities. They are nearly all one storied and have large patios. From the streets the houses are more attractive than in Caracas or Bogota, although in the interior they are much like those of these cities. The better class of residences have an entrance through a large double



ARTILLERY BARRACKS, GUATEMALA CITY.

door and into a passageway paved with contrasting stones in mosaic, often white and black. Through the passage the way leads to the patio. The patio is paved like the passage, but around it are corridors paved with a square red brick. At the edge of the corridors are borders of flowers. On the street side of the building and adjoining the entrance is the anteroom, with a large balconied window to the street; next to the anteroom is the main *sala* or drawing-room, with two or more balconied windows. The sala is joined to the rear by the dining room, the *comedor*, which connects both with the sala and with the patio, with the latter both by windows and by a door opening on the corridor. Next to the comedor come the bedchambers opening on the corridors. At the back, or on the other side of the patio, as



DINING ROOM IN THE PRESIDENT'S PALACE, GUATEMALA CITY, GUATEMALA.

The Delegates to the Pan-American Medical Congress were entertained here at a banquet by the President of the Republic.

the case may be, are the kitchen and servants' quarters. The interior of the house is very frequently decorated and furnished in the most lavish manner.

This is the older type of house, but like Mexico, Guatemala is gradually adopting a more modern type of structure and numbers of the more recent houses are such as one might find in Washington or New York, but which on the whole are more characteristic of Paris. These newer houses are changing the appearance of Guatemala, not only as seen from the streets but even more so as seen from the surrounding hills. Formerly as one looked down into the valley upon the city the low widespread houses of an even height with tiled roofs of varying color tones, here and there a great church towering and all criss-crossed with the regular chessboard arrangement of streets seemed, with its distance-blurred outlines, an immense spread-out carpet, woven in a regular pattern, and here and there set with Brobdingnagian furniture. Now the outlines are becoming more and more broken with modern structures. The streets are paved and the sidewalks are of smooth flagstones.

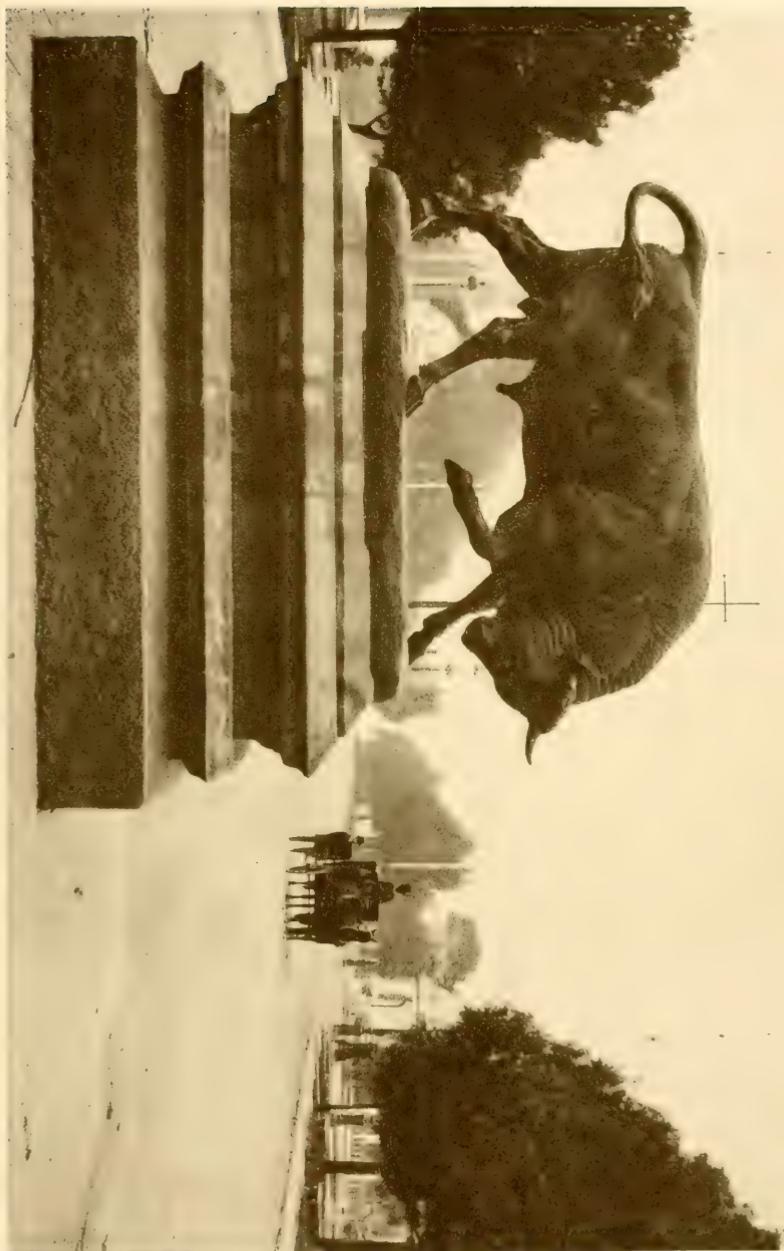
The principal public square is the Central, formerly called Plaza de Armas, in the center of the city, laid off in flower plats and with a statue of COLUMBUS and also a square stone tower, called a temple, with an equestrian statue of CARLOS IV of Spain. On the north side of the plaza is the municipal building, on the west the National Palace and government barracks, on the east the cathedral and bishop's palace, and on the south are shops.

Besides the Central there is the Estrada Cabrera Park and the Hill of Carmen, the Concordia, and the Boulevard of the 30th of June. The last is a fine broad avenue of about 2 miles in length, with flower plats in the center. At one end of the boulevard is a statue of MIGUEL GARCIA GRANADOS on a high marble column, the pedestal adorned with allegorical figures. At the other end of the boulevard is the statue of RUFINO BARRIOS on a broad quadrilateral pedestal, whose sides have bas relief carvings of notable events in Guatemalan history.

The cathedral is the most notable of all the churches of Guatemala City. It is most elaborately ornamented with carvings and is of fine proportions flanked by two square towers. The entrance is guarded by colossal figures in stone of the four evangelists. The main diameter of the church is about 275 feet. The interior is broad and roomy, with fine aisles. A novel effect for churches is produced by the blue and white ceiling. Other notable churches are those of San Francisco, Santo Domingo, Santa Teresa, and La Merced.

Most foreigners give the palm for handsome buildings in Guatemala City to the *Teatro Colon*, the national theater. The building is

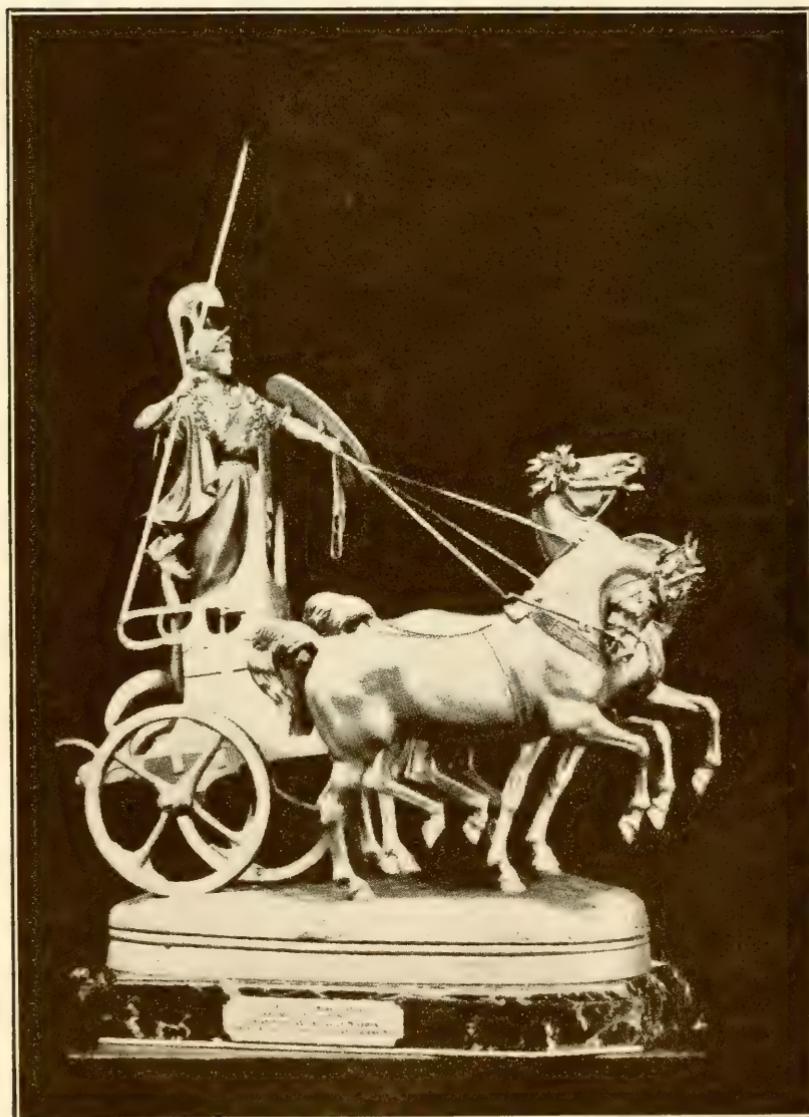
THE BULL MONUMENT ERECTED ON THE PASEO DE LA REFORMA, GUATEMALA CITY, DURING THE PRESIDENCY OF REINA BARROS, AS PART OF THE SCHEME OF ORNAMENTATION OF THIS BOULEVARD, WHICH IS THE PRINCIPAL THOROUGHFARE OF THE CAPITAL CITY.

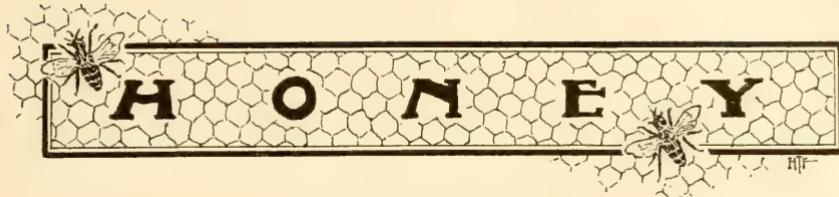


modeled after the church of the Madelaine in Paris. It is located in the center of beautifully laid out grounds set with shrubbery and finely kept flower plats. Orange and oleander trees predominate. The interior of the theater is elaborately decorated, but with very good taste.

The University is also a noteworthy building. As an institution of learning it is one of the best in Latin America.

Water is brought to the city by two aqueducts. The supply is abundant and the quality good.





BY RUSSELL HASTINGS MILLWARD.

IT is not known to which country the bee is really indigenous; but it is a well-established fact that in ancient times primitive man kept his beehives and gathered the honey, which he used for food and on sacred occasions brought before his gods as an offering. The fame of the honey gathered by the bees on the slopes of Hymettus was sung by Virgil, and even to-day this product of world-wide renown is served to the tourist by the zealous Greek. In both Egypt and Mexico honey has been found in earthen and metallic vessels, hermetically sealed, and in an excellent state of preservation, among the prehistoric ruins.

The finding of honey among the Aztec ruins establishes the fact beyond all question that bees were known in Mexico long before the days of CORTEZ, although scientists have attempted to disprove repeatedly the theory that bees of any species were native to America.

This valuable article of commerce may be described as the sweet sirup or nectar derived from the bees and other insects, which gather it from trees, plants, or flowers. It is both vegetable and animal in origin, and contains about 20 per cent of water, 75 per cent of reducing sugars, such as dextrose or levulose, twenty-five one-hundredths per cent of ash, and the balance of other components. Honey is variable in color and quality, the product of one district excelling that of another, and is commercially classified as follows: First, combed, or that which is contained in the cells of comb; second, extracted, or that which has been separated from the uncrushed comb by centrifugal force or gravity; third, strained, or that which has been removed from the crushed comb by straining or other means. In color, the best grade runs from clear, almost colorless to pale yel-



AN ANCIENT MAYA DRAWING.

The above drawing, according to M. BRASSEUR DE BOURBOURG, is the work of the ancient Mayas, of Yucatan, and represents their fire god, Canue, holding a pot of comb honey.

low, and the flavor depends upon the nature of the tree, plant, or flower from which it is gathered. With age, honey turns considerably darker in color; but both honey and comb will keep indefinitely without suffering decomposition.

The honey bee is usually found in swarms of from 5,000 to 75,000, and is divided into three distinct classes: The queen, or female; the drone, or male; and the worker, or neuter. Each hive contains but one queen, which propagates the species, frequently laying eggs at the rate of 2,000 a day. Upon the death of the queen a young neuter



Courtesy of the A. I. Root Company, Medina, Ohio.)

DRONE, QUEEN, AND WORKER BEE.

The drone, while making a loud buzzing noise, is harmless, as it has no sting. It is taken care of and fed by the worker bees, and if it becomes too numerous or is in the way, is ruthlessly destroyed. It is a very helpless insect, and has a life of only a few short weeks. The queen bee is fed and cared for by the worker. She lives generally from two to four years, if not accidentally destroyed, and lays several hundred thousand eggs each season, some of which hatch into worker bees and others into drones. The worker bee labors so assiduously in caring for the queens, nursing the young bees, and gathering honey that it wears itself out in from six weeks to six months.

is selected from the colony, its cell enlarged, and the food changed. The neuter then becomes a queen bee and is mated with the drones, who are afterwards destroyed by the workers.

Although the average life of the queen covers a period of three years of usefulness, it is considered advisable to annually restock each colony with a new queen. The systematic rearing of queen bees and the improvement of the breed are considered the most important branches of apiculture. It is also important in breeding queens that the so-called "hybrids" or mated queens should not be employed,



THE CEIBA TREE.

The hives of the wild bee are found in this tree throughout the States of Veracruz and Tamaulipas, Mexico. The Indians obtain the honey by smoking out the bees and scaling the tree by a native rope device.

on account of their inability to produce young bees of desirable and consistent character. Selections have been made from the various types of bees and an attempt made to combine all the good qualities of each species, but as yet it is quite impossible to find the bee that is stingless and, at the same time, the largest producer of honey and wax and the most prolific in breeding. It appears that each species possesses certain distinctions of race and is created to work out its own destiny, holding at all times the instincts and characteristics peculiar to its kind.

The drone bees live through periods of but from three to eight weeks and the workers from six weeks to six months.

These workers collect all the honey in their mouths, whence it passes into the crop or honey bag and is then carried to the hive, where it is ejected into the comb. They also construct the cells of the comb from a wax secretion in the honey and feed all of the other bees. The food of the young bees is called bee-bread, and consists of small pellets prepared from the pollen of flowers. Honey is fed to the adult drone bees.

It is interesting to note that the amount of honey involved in the secretion of a pound of wax is a much-debated question among students of bees, the various estimates ranging all the way from 2 to 20 pounds.

It is conservatively estimated that over 300,000 tons of honey are produced in the world each year, of which the American Republics yield about two-thirds. This quantity, put up in standard combs of 14 ounces each, would, if the combs were placed side by side endwise, make a line 50,000 miles long, or twice the circumference of the earth at the equator.

Previous to 1852, when the Rev. L. L. LANGSTROTH invented a practical movable-frame beehive, which would permit inspection of the combs at any time without injury to the bees, honey was gathered in the most promiscuous manner, and little effort was made to preserve the bee. The demand for honey has become so great, however, that the conservation of the bee has become a question of vital importance to all nations, and especially to the American Republics, where the subject is attracting considerable attention. The Bureau of Entomology of the United States Department of Agriculture annually sets aside about \$10,000 for the study of apiculture, and employs five or six trained experts who devote their whole time to the study of bees, one of their number being a bacteriologist who investigates bee diseases. Many state and agricultural colleges also give more or less attention to the subject.

According to LATREILLE, the European species of bees predominate in America; but it is evident that the stingless variety of bee is a native of South and Central America and Mexico, where honey has

been gathered by the natives for many centuries; and that many of the other varieties found were introduced from China, Japan, and Palestine, as well as from European countries.



(Courtesy of the I. A. Root Company, Medina, Ohio.)

DANDELIONS IN FULL BLOOM.

These fields yield both honey and pollen, not only at the time of year when they serve the best purpose—preceding fruit bloom, when they act as a stimulator of brood rearing—but also later in the year, when the main flowers on which the bees depend have ceased to bloom.

When the Pilgrims landed at Plymouth in 1620 honey was not to be found in that part of the country, and bees were consequently imported from England in order to meet the requirements of the time, but the first systematic keeping of bees in the United States was probably established at Newbury, Massachusetts.

In a bulletin of the United States Department of Agriculture it is stated that the importance of the industry was of municipal moment to the extent of holding out to one JOHN EALES, who was then living in what is now Hingham, Massachusetts, an inducement to come to Newbury for the purpose of teaching the settlers how to make hives and to care for bees. In August, 1644, EALES came "to one JOHN DAVIS, a renter of a farm, with ye expectation of his doing service which the Towne was not acquainted with." Apparently, however, JOHN EALES was not, financially or otherwise, a success. He was later arrested and put in jail at Ipswich, according to the record, and on May 14, 1645—

It is conceived JOHN EALES should be placed in some convenient place where he may be implied in his trade of beehive making, etc.; and ye Towne of Newbury to make up what his work wanteth of defraying ye charge of his livelyhoode.

Since this time, however, steady advances have been made in the establishment of systematic bee culture in the United States. Bees have been imported from all parts of the world, and the industry has reached such an extent that the annual average yield of honey now amounts to about \$20,000,000 and beeswax about \$2,000,000.

The United States imports annually about 2,500,000 pounds of honey and about 750,000 pounds of beeswax, about 95 per cent of which comes from Cuba, Mexico, Haiti, Salvador, Dominican Republic, and Venezuela; and all of this regardless of the fact that according to the census about 700,000 bee keepers, or 1 in every 120 of the entire population, are engaged in the industry throughout the United States.

The passage of various pure-food laws and the establishment of a rigid inspection by many of the importing countries have made the marketing of adulterated honey almost an impossibility. No substitute for honey, or artificial means of preparation, have as yet been found, and for many years the pure product has been adulterated with commercial glucose, cane sugar, or invert sugar sometimes to as great an extent as 85 per cent. It is the opinion of many bee keepers that the feeding of bees with saccharine substances, for the purpose of increasing the production of honey, should be considered as palpable adulteration; and that the artificial coloring of the product by electrical means should be so stated when it is placed on the market.

The sage honey from California is pronounced by experts as an example of the purest, best flavored, and most consistent grade produced in the United States.

What is known as the Holy Land bee was first brought to the United States from Palestine, by a Mr. HOWARD, in 1884; since which time the species can be found in many parts of America and is regarded by apiculturists as one of the best honey producers. About



THE AGAVE OR CENTURY PLANT IN FULL BLOOM.

The agave or maguey plant, also called the American aloe, of which there are more than 150 species in the southwestern portions of the United States and in Mexico, is the most liberal yielder of nectar of American honey plants. The juice exudes so liberally from the flowers that it may be collected even without the aid of bees. Thriving on the arid or semiarid lands of these sections, it is most valuable to beekeepers. Although commonly supposed to take a hundred years to reach maturity, in reality it attains full growth in about ten years.

the time of the exportation of bees from Palestine, famous in ancient times for its honey, the Turkish Government became deeply interested in the industry and imposed an exorbitant tax upon the apiaries. In 1889 an interesting judgment was rendered against one of the bee keepers who was unable to pay his taxes. The Government sold his apiaries at public auction, in Jerusalem, but the difficulty arose in the attempt to deliver the goods to the purchaser, which, under the terms of the sale, the officials were bound to do. The purchaser, the officials, and a number of camel drivers went to the apiary and attempted to remove the hives, but the bees swarmed around and stung them with



AN APIARY WITH HIVES RAISED TO PREVENT ATTACKS FROM ANTS.

In the southern part of the United States, and in tropical America in general, the ant is the greatest foe of the bee. Constant vigilance is necessary to prevent them from attacking and destroying the bees and taking possession of their hives. Various methods are taken to destroy them, but the easiest preventive measure is to insert the supports on which the hives rest in cups filled with coal tar, creosote, or crude petroleum, as the ants will not attempt to cross such material.

such fury that the entire party had to seek shelter. A compromise was immediately effected with the original owner.

Honey is used in the far eastern countries in the manufacture of hydromel, a popular and most intoxicating beverage, having an agreeable flavor closely resembling cider. Alcohol has also been distilled from honey, but not to any great extent.

Many of the large manufacturers of candy in the United States complain that they have great difficulty in purchasing sufficient honey to meet their requirements owing to the recent and enormous demand of German manufacturers who secure about 60 per cent of all the

product that is exported from the American Republics. It is estimated that over half of the world's production is employed in the manufacture of candy and medicinal preparations, and new uses are being found for honey and beeswax almost daily.

In the manufacture of biscuits and fancy cakes in the United States, Germany, and England, honey is extensively employed, both on account of its usefulness as a base in sweetening and its remarkable immunity from organic change. This answers the question which has been a matter of great speculation by those unacquainted with the inside secrets of the baking industry, as to how the numer-



AN APIARY ON A COFFEE PLANTATION.

The coffee plants afford a partial shade from the tropical sun and while the flowering season is short, the nectar produces a fine, clear grade of honey. The plants are grown in some parts of Florida especially for producing honey.

ous varieties of sweet crackers and cakes "kept on hand" through long periods of time remained apparently fresh, in the little village stores scattered throughout the country districts. The art of making fancy crackers that would "keep indefinitely" has for many years been considered one of the mysteries of the baking industry, attributed by the natives of Latin America to "Yankee cleverness."

Not many industries offer as many attractions as apiculture. It may be taken up by agriculturists as a specialty or as a side line. A small capital only is required to start the enterprise, and returns are measured and certain if ordinary care is taken in the selection of the

location of the apiaries and consistent management of the bees maintained. Furthermore, a good market is always afforded for the product, which is neither perishable nor subject to a marked depreciation in value.

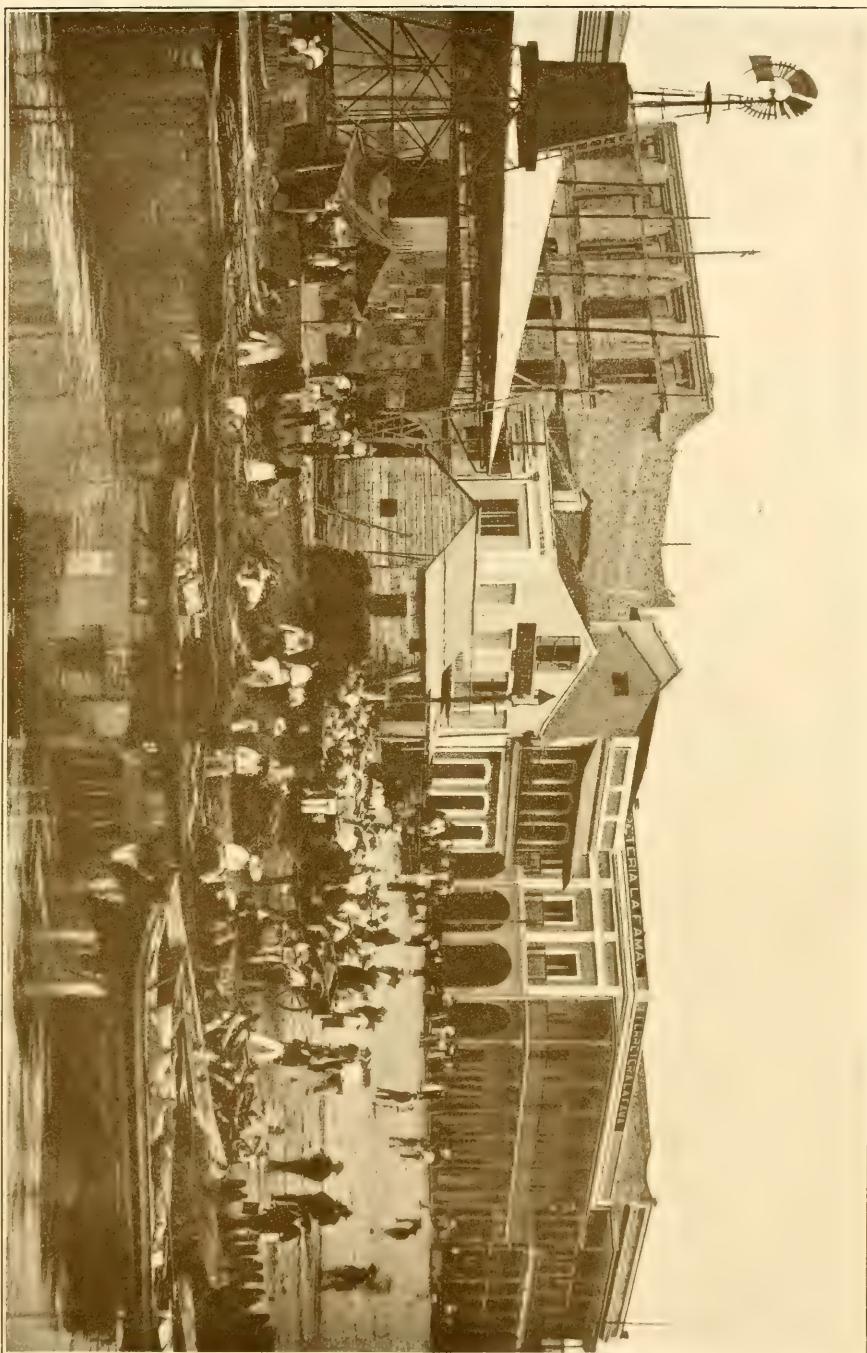
Practically all of the wild honey is shipped in barrels and is either extracted or strained, the handling of beeswax being usually treated as a separate industry and one which has been followed extensively by the natives of Latin America for many years. When the wax has been refined and bleached, it is used in many of the arts and trades, and has become an article of great commercial value the world over. It was used by the ancients in the preservation of tissues, preventing mold and mildew, and in embalming and encaustic painting. It is extensively employed in the manufacture of wax candles and tapers, varnishes, paints, polish for pianos, furniture, carriages, floorings, various kinds of glazed and ornamental wall papers, and artificial flowers. Electrotypes adapt it to the forming of molds, and in the machinery trade it is used as a preventive against rust. Laundries are great consumers of wax, which is used as a polish in the finishing of starched articles. Combined with tallow it is used as a coating for canvas awnings, tents, sails, and cordage to prevent cracking or splitting and mildew. Electrical supply houses use it in winding the wire, and it serves the druggists as a basis for salves, as well as for use in making plasters, certain kinds of ointments, and in some medicines. The Hepburn Pure Food Law will cause it to supersede paraffin or ceresin in this respect, as also in the manufacture of candy. Beeswax is used by dentists in taking impressions, and also by patternmakers. As candles made from beeswax emit a permeating perfume and the deposit left after burning does not injure fabrics or pictures, their use in churches is much favored.

In the Argentine Republic honey is in such great demand that it is necessary to import over 100,000 pounds annually, most of which comes from Chile, although about 10,000 pounds of strained honey are annually exported to Germany and France, where it is employed in the manufacture of fancy crackers.

An effort is now being made by the Government to introduce modern methods of bee keeping and encourage the farmers to engage in the industry as a side line.

The Agricultural Department of the Brazilian Government is now making a special effort to develop the industry of apiculture and increase the output of honey and beeswax. In order to meet the ever-increasing demand, modern facilities are being rapidly afforded which will permit the transportation of the product to convenient shipping points and encourage both the home and foreign trade.

Many varieties of bees are found in Brazil, and for some time the natives have gathered the honey, which, on account of its fine quality,



Wild honey forms one of the principal articles of commerce in Tampico. On the large dugout canoe in the center of the picture can be seen the 5-gallon tin cans in which honey is brought from the interior. Here it is placed in barrels and exported abroad.

has been used almost exclusively for medicinal purposes. The Tapur-riba tree, in blossom time, is the source of a most abundant supply of wild honey; but the product has not been exported to any great extent, as a ready sale has always been found in the local markets.

The stingless bee which is common to all of the Latin-American countries is found in great numbers throughout Brazil and numerous other varieties have been imported from Europe, notably the Italian, which was introduced in 1904, when the Government began to take an active interest in apiculture. At Campos, where modern methods of bee keeping have been practiced, an excellent quality of comb



(Courtesy of the A. I. Root Company, Medina, Ohio.)

INSPECTING THE COMB—SHOWING PROCESS BY WHICH THE MOVABLE FRAME IS OPERATED.

The frames must be handled in such a way as not to crush or bruise the bees, as otherwise they will be so excited as to sting with fury. The expert bee keeper will brush or knock the bees from the comb and very seldom get stung.

honey is produced, although the hives, numbering over 300, are most primitive in character, consisting simply of ordinary wooden boxes. The industry is also conducted in many parts of São Paulo, where the planters of vanilla are encouraged by the Government to keep bees in order that the female flowers may be artificially fertilized. In Minas Geraes, Parana, Rio de Janeiro, and Rio Grande do Sul the most modern and systematic methods of apiculture are practiced and the product strained and sold in the local markets, usually in pint bottles. The wax is used in the manufacture of candles for the church.

Although the production of honey is enormous, but 60,000 pounds are exported annually, most of which goes to Germany.

The rare honey-gathering wasp is found in southern Brazil and in parts of Uruguay and Paraguay, where it is indigenous; and it is reported that it produces an excellent grade of honey, which differs from that produced by the bee only in being wholly and completely soluble in alcohol, leaving no residue, whereas bee honey, when sub-



(Courtesy of the A. I. Root Company, Medina, Ohio.)

A SWARM OF BEES ABOUT TO BE HIVED.

It is not known just what causes bees to swarm in some cases, but two of the reasons are the inability of the hive to contain the large amount of honey the bees have produced, and the increase in the number of the insects beyond the capacity of the hive. Swarming can be prevented in most cases by keeping the wings of the queen bee clipped or by catching her just before she leaves in company with the swarm and putting her in a cage, as the bees will not go any great distance without their queen. One or more extra hives are generally kept on hand by bee keepers to use in such an emergency.

jected to the same chemical process, deposits a crystallized saccharine matter. These wasps produce no wax, however, the honey being at all times inclosed in cells of clay or mud.

In Chile, bees were first introduced from Italy by Mr. PATRICIO LARRAIN GANDARILLAS, about forty-five years ago, since which time rapid progress has been made in the advancement of apiculture.

There are now nearly 100,000 apiaries in actual operation throughout the Republic, the majority of which are located in the Provinces of Aconcagua and Coquimbo, where the mildness of the climate and richness of the flora are peculiarly adapted to the culture of the Italian bee. In no other part of Latin America has the bee worked more industriously, and it is estimated that each hive will average an annual yield of 50 pounds of honey, and frequently as much as 80 pounds have been found in a single hive. A system of farming on shares has been adopted by a number of the apiculturists, with most satisfactory results.

Over 1,000,000 pounds of purified wax and 5,000,000 pounds of honey are exported annually from Chile, of which Germany purchases about 60 per cent, Great Britain 15 per cent, France 15 per cent, and Belgium and the Argentine Republic 10 per cent, the product being pronounced fine in quality and bringing top prices at all times in the markets.

European bees were introduced into Cuba by emigrants, who transported them from Florida in 1763, and in 1777 the industry had developed to such enormous proportions that 715,000 pounds of beeswax, equal in quality to the famous Venetian, were exported from Havana, and, in 1803, 1,900 tons of beeswax were exported.

While the keeping of bees, as practiced in many of the inland country districts, is of a most primitive character, the honey being taken from the hives without regard to the preservation of the bees, there is a decided advance in the systematic application of apiculture.

Italian bees have been introduced with great success and seem to thrive in the cane fields, producing a particularly fine grade of honey and wax.

About 350,000 gallons of honey and 2,000,000 pounds of wax are produced each year in Cuba.

About 50 per cent of the honey goes to Germany, 25 per cent to France, 15 per cent to the United States, and 10 per cent to various European countries. Of the beeswax, Germany secures about 50 per cent, the United States 25 per cent, France 20 per cent, and other European countries 5 per cent.

Wild honey is found in abundance throughout Mexico, and especially in the forests of the Algarroba tree, whose flowers through a long blooming season are always a favored source of supply to the bee. The industry of gathering the honey, in the old days, was followed chiefly for the purpose of obtaining the beeswax, which formed a valuable material in the manufacture of candles consumed in the ceremonies of the church.

Hives were found among the rocks and suspended from trees, and the natives, in gathering the honey, smoked out the bees with little regard as to what became of them eventually. Over the door frames

of many of the old residences can still be found elaborate and highly decorated beehives, constructed of pottery and carved woods; and in many parts of Mexico the bees are known by the endearing term of "angelitos" or "little angels." These bees are of the stingless variety and highly regarded by the natives, who look upon them as household pets. Children are found in the patios and gardens with candy in their hands, which they playfully share with the bees, and it has often been remarked by tourists how fearlessly and gently the apparently ferocious little insects are brushed aside if they become too greedy or annoying.



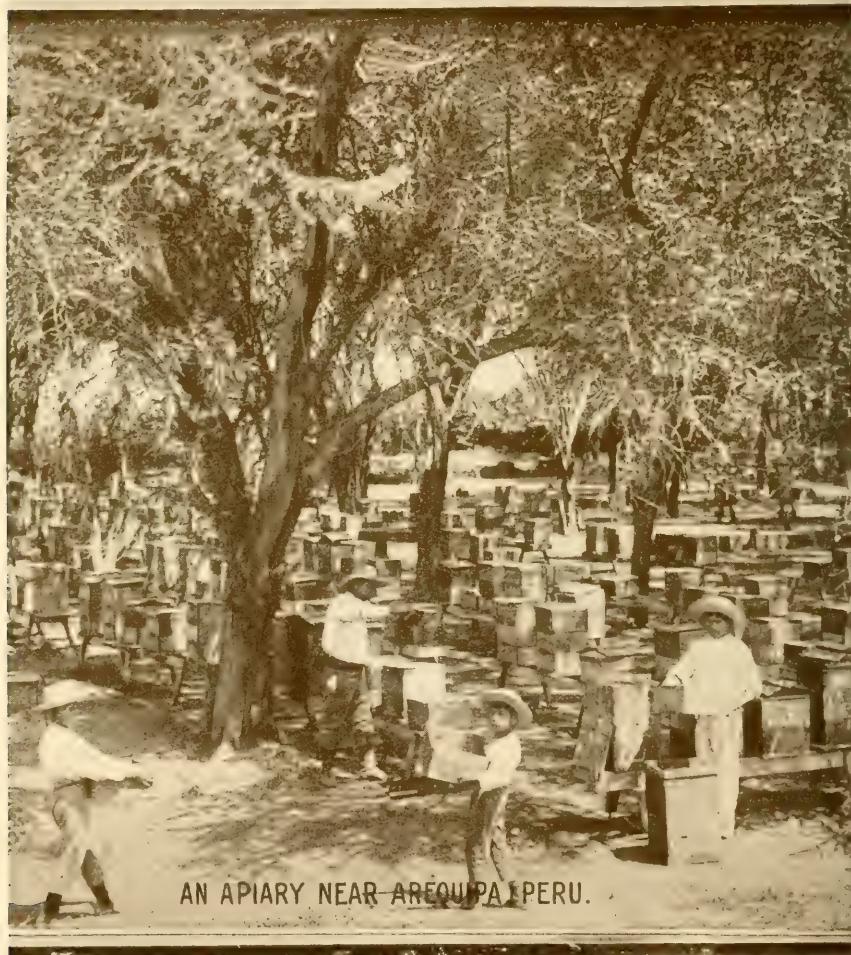
A TYPICAL ALGARROBA FOREST.

Wild honey is found in abundance in the algarroba or mesquite forests throughout the southwestern sections of the United States and in Mexico. Ordinarily a shrub, when located where it receives plenty of water it becomes a tree of sometimes a height of 60 feet and of considerable thickness. It flowers plentifully for about ten weeks. There is also a gum which oozes from the trunk and which is used in the manufacture of confectionery and in laundries. The tree is found as far south as the Argentine Republic and Chile, and also in the Hawaiian Islands.

In 1890, however, the Mexican Government took a great interest in the subject of apiculture, and has since established experimental apiaries and encouraged the systematic keeping of bees.

The product from the States of Tamaulipas, Veracruz, and San Luis Potosi has especially been in great demand on account of its excellent flavor. Most of this honey is gathered during two seasons of the year, from May 1 to July 31 and from September 1 to November 30. In these districts the same primitive methods are employed to-day as of two centuries ago, the operation consisting in simply placing boxes or receptacles of almost any description in

the trees. Cane sugar is sprinkled about and the wild bees are readily attracted. When the comb has assumed a reasonable proportion, the bees are smoked away and the honey squeezed out and placed in 2-gallon cans and carried to Tampico, where a good market is maintained for both the honey and wax, although not a great proportion of the wax is exported.



(Courtesy of the A. L. Root Company, Medina, Ohio.)

AN APIARY NEAR AREQUIPA, PERU.

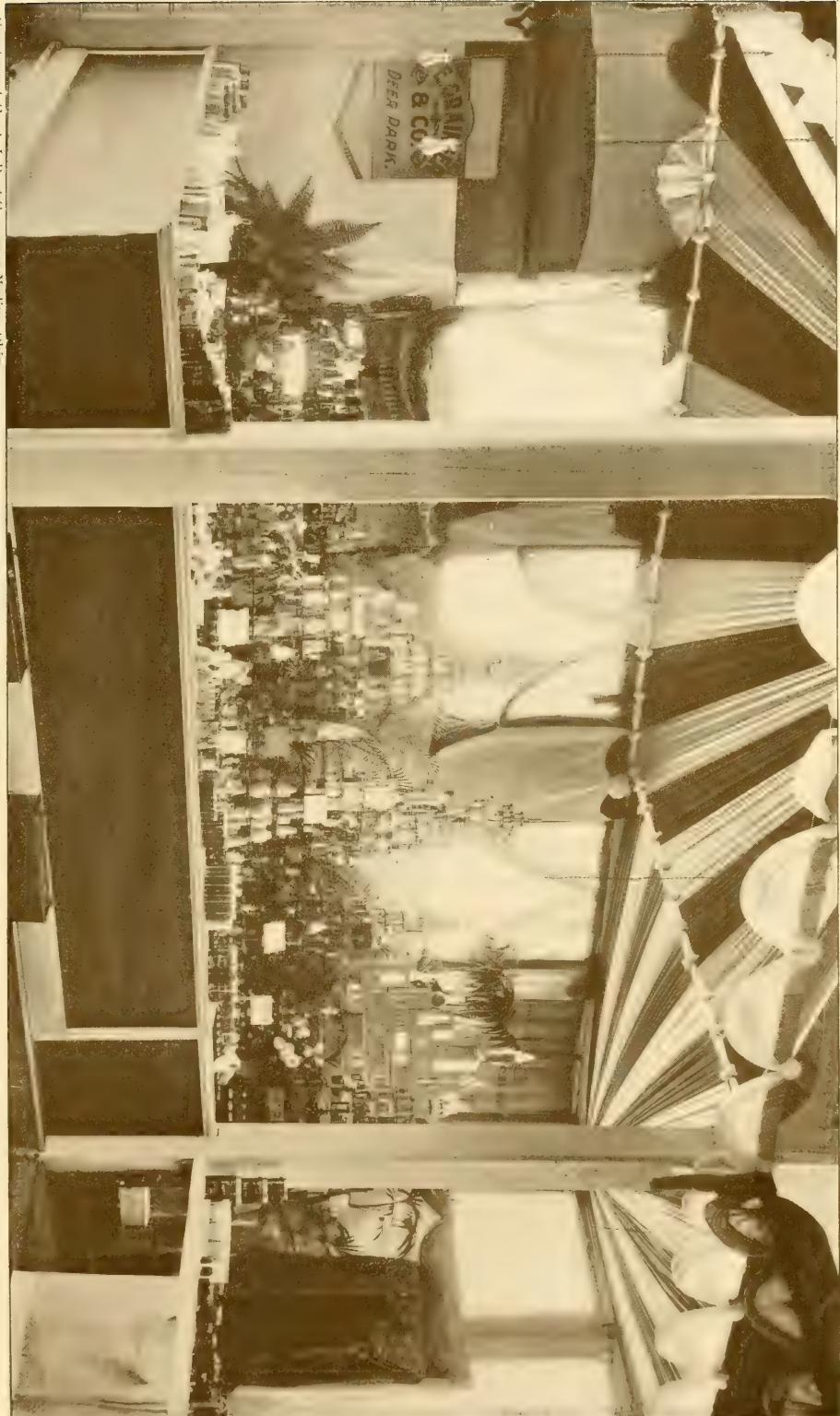
This apiary is located in the heart of the alfalfa country, and quite near the famous Harvard Observatory. The bees are of the stingless variety, and thrive on Peruvian alfalfa.

Mexico exports annually about \$90,000 in strained honey, most of which is shipped to the United States, Germany, and England; and imports about \$50,000 in comb honey, most of which comes from the United States, England, and Germany, and a small amount even from China.

(Courtesy of the A. T. Root Company, Medina, Ohio.

EXHIBITION OF HONEY PUT UP FOR COMMERCIAL USE.

New uses are constantly being found for honey. Since the passage of the Hepburn Pure Food Law adulteration of this product has practically ceased, so that the purchaser is practically assured that the honey which he buys is pure. Besides its use in confectionery and cakes, honey is used to a considerable extent in the manufacture of fine soaps and other oleo preparations, as it has an excellent effect upon the skin. Both honey and beeswax are used in the preparation of salves. Nearly every sewing basket the world over contains a small piece of beeswax which serves to strengthen and preserve the thread.



Over 25,000 pounds of wild honey are annually exported from the port of Tampico, and the industry has become one of great importance in that district.

An interesting honey-collecting ant is also found in Mexico, which lives in underground chambers and gathers honey from the numerous wild flowers and plants. A certain number of these ants remain at home and are used as living storehouses. They are fed honey by the workers until they swell to about the size of a pea, and during the seasons when honey is not obtainable they regurgitate their supplies, drop by drop, as food for the colony.

Wild honey is found in great quantities in the woods near San Juan del Norte, Nicaragua, but is not exported to foreign markets owing to a strong local demand throughout the inland towns and villages, where it is always readily purchased and consumed by the native population. So great is the demand for honey in Nicaragua that considerable supplies have to be imported from other Central American countries and Mexico. Strained honey has become almost a staple article in the markets at Greytown, Bluefields, and Managua.

In Paraguay honey has been gathered by the natives more for the purpose of extracting the wax, which is used extensively in the manufacture of candles, than for the strained honey itself. By a process of fermentation an intoxicating beverage is made from the honey and a popular demand for the product has been created throughout the Republic.

The Indians of Peru gather wild honey and find a ready sale in the local markets, where there is an increasing demand for both strained and comb honey.

The Department of Agriculture is now attempting to encourage the systematic culture of bees and increase the annual production of honey and wax.

There are about 10,000 pounds of honey imported by Peru each year from Great Britain, the United States, and Hongkong. An import duty of 40 per cent is charged in order to encourage home production.

The stingless bee is highly domesticated by the Peruvian farmers, and thrives on the alfalfa which grows in great abundance, both on account of the high elevation of the country and a climate that is semiarid in character. Peruvian alfalfa was the first introduced into California, and is now extensively grown throughout the State, being pronounced superior to any variety yet discovered.

The black ant is the deadly enemy of nearly all of the American bees, and it is only with great difficulty that the little sentinels of the beehives are enabled to protect their colonies and production from the persistent attacks of these ferocious little warriors. In many districts the beehives are raised from the ground and set in enclosures of water to prevent attacks from ants and other insects.



(Photo by C. B. Waite. Mexico City.)

THE NATIONAL MUSEUM OF MEXICO.

THE NATIONAL MUSEUM OF MEXICO.^a

THE National Museum of Mexico may be said to have just emerged from its infancy, as it is only within the last decade that any real attention has been given to it. It has a wonderfully wide scope, and a most brilliant future, as the Republic is probably the richest field in the world to-day for the archaeologist. Many buried cities are being discovered, and traces of prehistoric civilization in America are constantly throwing an illuminating ray upon the many vexing problems which have for years been the despair of the historian. In fact, Mexico may to-day very properly claim the title of "The Egypt of America." Why, indeed, should the archaeologist go to Egypt, when Mexico offers to him such rich and inexhaustible fields as Mitla, Monte Alban, Palenque, San Juan de Teotihuacan, the ruins of Uxmal, and of Chi Chen Itza in Yucatan, and many others which are just being unearthed?

The museum located at the National Capital is generally the first place sought out by the thousands of tourists who pour into the country each year. And it is well worth a visit, for it offers certain things which no other museum in the world could offer to the eyes of the curious.

^a By George Vest Guyer.

The best brief sketch of its history is given by its director, LIC. GENARO GARCIA, himself a notable historian and archæologist, in the introduction to Volume 1, No. 1, of the ^a "Annals of the National Museum of Archæology, History and Ethnology," a most creditable publication which is issued monthly by the institution, under the direct supervision of LIC. GARCIA. In speaking of the foundation of the museum which he has brought up to such a creditable standard, LIC. GARCIA says:

Under the Spanish domination there existed only a small collection of antiquities in Mexico, consisting, for the greater part, of the codexes and native



(Photo by C. B. Waite, Mexico City.)

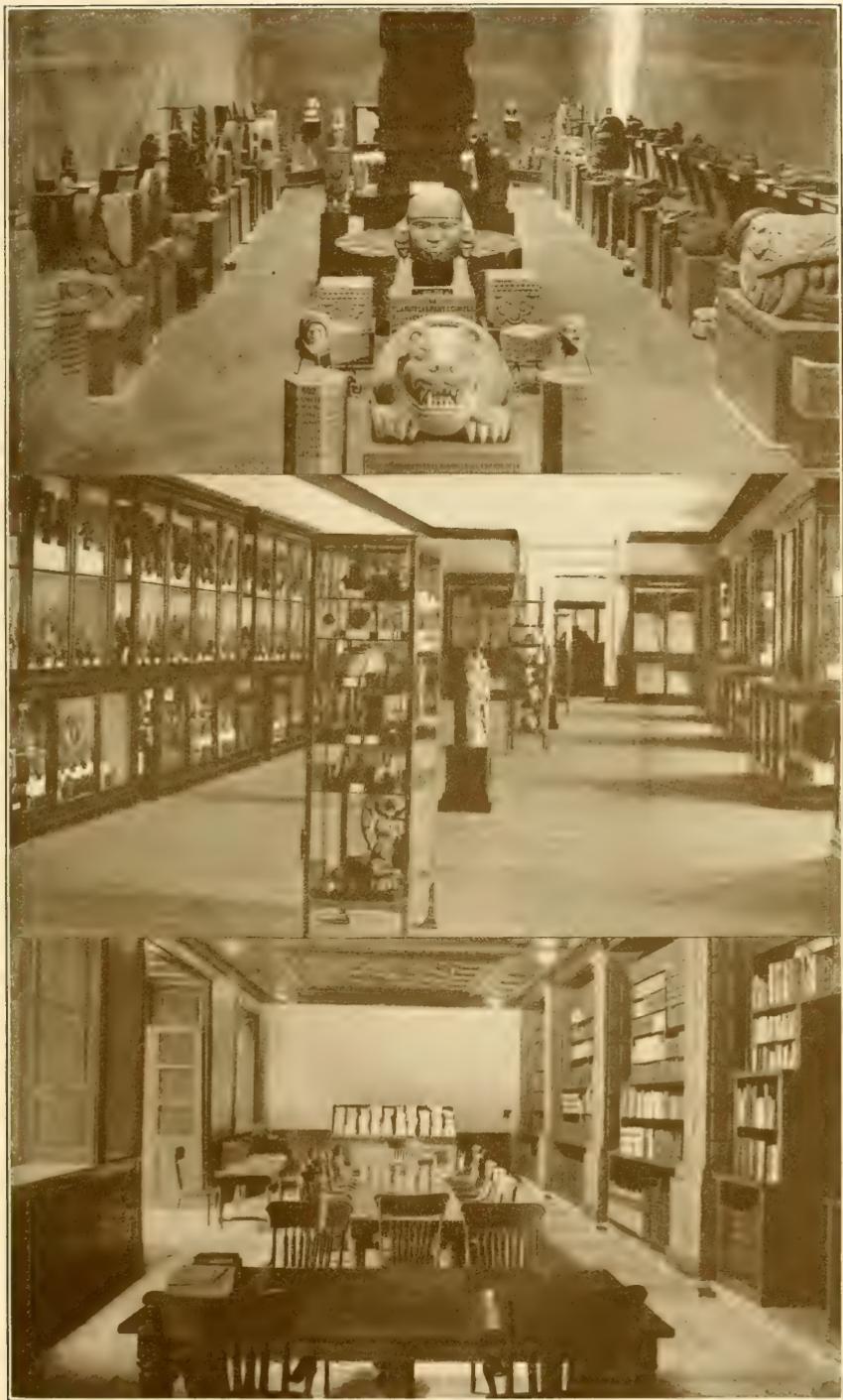
RELICS OF THE AZTEC CIVILIZATION NOW IN THE NATIONAL MUSEUM AT MEXICO CITY.

It is much to be regretted that the conquerors of Mexico destroyed most of the picture writings and marvelous carvings which would have served to give us a more complete history of the Toltecs, the Chichimecs, the Nahuals, and the Aztecs, or Acolhuans, who formerly occupied the country. Had more of these been preserved, we might have been able to learn something of the methods by which their astronomers determined the apparent motion of the sun and the length of the solar year; how their artisans worked and polished crystal and other stones; how they cast figures of gold, and silver in one piece; how filigree ornaments were made without soldering; how they applied to pottery the even and transparent glazes, with colors that, after remaining for centuries underground, still are fresh and brilliant; and wove extremely delicate tissues of cotton mixed with silky feathers and rabbit's fur. These, as well as other arts of a vanished civilization, are now little more than a matter of conjecture.

manuscripts which a cavalier of Milan, Italy, Don LORENZO DE BOTURINI Y BENADUCI, SEÑOR DE LA TORE Y HOMO, had been able to collect, at the cost of unheard-of sacrifices, and which were confiscated in the most unjust manner by the vice-regal government in 1743. These antiquities were first kept in the office of the viceroy's secretary, and afterwards in the library of the Royal and Pontifical University of Mexico, where they were taken by order of His Excellency ANTONIO MARIA DE BUCARELI Y URSSA, viceroy of New Spain. In one and another place they were greatly damaged by neglect, humidity, rats, and thefts.

Upon the consummation of Mexico's independence the National Government not only directed that the existing antiquities be kept at the same university,

^a *Anales del Museo Nacional. Tomo 1, número 1. Mayo de 1909. Pages V-VIII.*



INTERIOR VIEWS IN NATIONAL MUSEUM OF MEXICO.

1. The western part of the grand Hall of Monoliths. 2. Hall containing archaeological objects of Zapotecan civilization. 3. West wing of Reading Room.

but assigned, in addition, the sum of \$1,892, 1 real, and 1 "grano," for the salaries of a directing professor of botany, a gardener, and the expenses of the garden.

When this appropriation was made the Government did not as yet have in mind the establishment of a national museum which, according to Gen. LUCAS ALAMAN, then Secretary of State and Foreign Relations, in a memorial presented to Congress on January 11, 1825, was to be a matter for the future. Notwithstanding all this, Don SEBASTIAN CAMACHO, successor to General ALAMAN, announced to Congress during the latter part of the same year that the National Museum had been established, "under the most happy auspices, with a keeper, intrusted with its arrangement, safety, and development," and with many projects for "scientific trips, discoveries, excavations, and other operations" which were never made. The museum, therefore, had no other end than that of the conservation of a few antiquities, unclassified, and in generally bad shape.



(Photo by C. B. Waite, Mexico City.)

STONE IMAGE OF TIGER FOUND IN CORDOBANES STREET, MEXICO CITY, AND
NOW IN THE NATIONAL MUSEUM.

The museum proper had its birth by virtue of the decree of November 21, which ordered its formal creation and its division into three branches—antiquities, products of natural history and industry, and botanical garden. The decree ordered that it should be under the direction of seven persons, none of whom should receive any salary, and that its schedule of employees and expenses should be as follows, annually:

A keeper, secretary of the directive board.....	\$1,200
A professor in natural history.....	1,200
A designer and concierge.....	600
A gardener.....	600
For the purchase of objects, cost of conservation, and improvements.....	3,000
For desk expenses and servants' hire.....	800
Minor expenses, peon hire, and gardener at Chapultepec.....	1,000
 Total.....	 8,400



A STONE IMAGE OF XOCHIPILLI, THE GODDESS OF FLOWERS OF THE AZTECS,
NOW IN THE NATIONAL MUSEUM OF ARCHÆOLOGY, HISTORY, AND ETH-
NOLOGY OF MEXICO.

The chief executive of the Republic proceeded at once to the organization of the museum in accordance with the foregoing decree, and appointed as members of the Directive Board MESSRS. PABLO DE LA LLAVE, ISIDRO IGNACIO ICAZA, MIGUEL BUSTAMANTE, JOSE MARIANO SANCHEZ MORA, IGNACIO CUBAS, DR. RAFAEL OLAGUIBEL, and IGNACIO MORA. Although the president was empowered to move the museum, from May 20, 1831, to the building formerly occupied by the now extinct Inquisition, the date of removal was indefinitely postponed and the establishment continued its existence at the university without being able to make the slightest development. For many years afterwards it was grossly neglected.

Upon the arrival of the Archduke MAXIMILIAN a decree was issued, December 4, 1865, declaring that the Public Museum of Natural History, Archæology, and History was henceforth under his immediate protection, and orders were given



COLOSSAL HEAD OF SERPENT.

This represents the head of a snake, with feather ornaments on the back. The mouth is open and enormous fangs protrude from it. The stone was found beneath the base of one of the columns of the old cathedral, which was razed at the close of the sixteenth century, and is presumed to have formed part of a series of similar ornaments of a wall inclosing the worship mounds of aboriginal Mexico. Its length is 62 inches, width across the fangs 50 inches, and height 44 inches.

that it should be removed to the department in the National Palace which it actually occupies to-day, the same having been used before as the Casa de Moneda; that it should have a library, to be formed from books owned by the university and by the convents which had just been abolished, and that the Government would provide the expenses of installation, conservation, and development.

After the constitutional government triumphed over MAXIMILIAN, it appropriated, in the budget for 1867-1868, the sum of \$12,000 for the museum; half of which was for expenses and the other half for the salaries of a director, two professors of natural history, a preparador, a clerk, an errand boy, and a porter. Unfortunately the poverty of the public treasury at that time prevented the Government for many years from increasing the appropriations for the museum, which only reached \$12,160 during the fiscal year 1876-1877, for which reason it had little opportunity to make any progress.



COATLICUE, THE MOTHER OF HUITZILOPOCHTLI, THE WAR GOD OF THE
ANCIENT MEXICANS.

According to the inscription it bears, this idol was discovered on August 15, 1790, in leveling the ground of the main square in Mexico City. It must have been located in the Temple of Atlaulico, which was erected in the year 1491 of the Christian Era, as this date is engraved on the monolith. At the base of the monument is seen, in bas-relief, the image of the god Macuixochitl. There is also a dispute regarding this idol, some archaeologists giving the name Teoyaomiqui to one of the images, and others claiming that it represents only the god Huitzilopochtli. It is nearly 10 feet high by about 3 feet in diameter.

When Gen. PORFIRIO DIAZ came into the supreme magistracy of the Republic, he, the indisputable restorer of the public peace and the first factor in the actual progress of Mexico, gave a great impulse to all the federal educational establishments. The museum, which in 1877-1878 only had an appropriation of \$13,360, received an increase each year, until in the year 1901 it reached the sum of \$24,797.20. In this manner its development was enabled to keep pace with the development of the rest of the country.

The progress of the museum has been very rapid since LIC. DON JUSTO SIERRA, secretary of public instruction, took charge of the educational development of Mexico, and during the past three years it has enlarged its collections until they consist of nearly 70,000 objects. Such an abnormal development made the space occupied by it too small, and it was divided into two departments: National Museum of History, Archæology, and Ethnology, and National Museum of History. The former remains in the National Palace, and the latter is being removed to a new building of sufficient size for its requirements.

A striking proof of the efforts made by the Supreme Government to perfect its educational establishments is the fact that the present annual appropriation for the museum of \$120,000 is almost ten times as great as was the appropriation of 1867-1868.

The publication in which this sketch appeared is of comparatively recent origin, in so far as its actual importance is concerned. It was founded in 1877, its director at that time being Prof. GUMESINDO MENDOZA, his principal collaborators being MANUEL OROZCO Y BERRA, and LIC. ALFREDO CHAVERO. It was not at that time printed in the museum, as it is only since 1885 that the printing plant of the museum, which had a very humble beginning, got its start, the nucleus of which was a small Colombine press, model 2, chiefly used for running off cards, or classification slips for the objects contained in the establishment. From this time on, however, the various directors who came and went, each recognizing the importance of having a well equipped print shop, made important additions, until the plant attained its highest degree of efficiency, a year or so ago, with the acquisition of an Optimus press. To celebrate its acquisition two special studies were written and run off on the new press, one of which, entitled "PORFIRIO DIAZ, Sus Padres, Niñez y Juventud" ("Porfirio Diaz, his parents, childhood and youth"), was written by LIC. GARCIA, then professor of history in the museum, and the edition, which was beautifully gotten up, was immediately exhausted.

Shortly after this, or about the middle of 1907, LIC. GARCIA was made subdirector of the museum, still retaining, however, the chair of history. He was even at this time one of the most widely known intellectual figures in the Republic, having been a member of the Chamber of Deputies since 1894, but better known throughout Mexico as a historian. Some of the books which have emanated from his pen are: "Character of the Spanish Conquest in America and Mexico," "The plan of independence of New Spain in 1808," "BERNAL DIAZ del Castillo's conquest of Mexico, according to the autograph codex,"



CHALCHIUHTLICUE, THE AZTEC GODDESS OF WATER.

This is a huge monolith nearly 11 feet high and over 5 feet across, weighing nearly 40,000 pounds. Although very much disfigured in its carvings, it is still nearly perfect in form. It came from Tiotihuacan, near the Pyramids of the Sun and Moon, and is an idol of prehistoric origin.

“JUAREZ—a refutation of Don FRANCISCO BULNES,” and “LEONA VICARIO, the Insurgent Heroine.” Besides these he has prepared 28 volumes of unpublished documents relative to the history of Mexico.

Upon his promotion to the position of subdirector LIC. GARCIA immediately proceeded to the scientific classification of the many



STONE VASE.

This vase, as well as the Sacrificial and Calendar Stones, is a splendid example of the artistic labors of the early Mexican inhabitants. The disk of the Calendar Stone, or Stone of the Sun (shown on the cover of this issue of the Bulletin), is wrought from an enormous slab of basaltic porphyry. It stands out in relief from the surface of the block 9 inches, has a diameter of 11 feet 8 inches, and is of special interest on account of the controversy among archaeologists regarding its origin and purpose. According to the best authority on the subject, it was constructed by order of the reigning king of Mexico Axayacatl, about 1479 A. D., to replace the sacrificial stone used by his father. It was used for many years for this purpose, but was afterwards buried by order of the Spanish Bishop of Montufar until 1790, when it was discovered and built into the side of the cathedral, where it remained until 1885, being then removed to its present location in the National Museum. The central figures represent the sun, while on the surrounding surface are carvings representing the ancient Mexican method of computing time—consisting of hours, days, weeks, months, years, and cycles of fifty-two years each—since their arrival in that country, about 231 A. D.

articles contained in the museum, giving to each object a card specifying both its vulgar and scientific name, the place where it originated, and such other observations as would give the public an intelligent idea regarding it. He added greatly to the collections of the museum, acquiring in one year alone 74,000 objects, and perfected the official publication known as “Anales del Museo Nacional,” bringing it up

to such a high standard that it is to-day perhaps the best publication of its kind in the world.

Having finally been made Director in Chief, LIC. GARCIA secured the separation of the museum into two departments, thus making a separate branch entirely of the department of natural history and subdividing the national museum of archæology, history, and ethnology into six departments—archæology, history, ethnology, industrial retrospective art, publications, and library.

ARCHÆOLOGY.

This department is composed of seven large halls, which are called "salon azteca," "salon tolteca," "salon tarasco," "salon mixteca," "salon zapoteca," etc., each hall thus representing a distinct division of Mexican archæology. Many objects of gold, jade, clay, etc., have been exhibited in these halls and appropriately classified. One of the halls, the largest and the best lighted, is used for exhibiting the plaster casts of the important ruins of Palenque, Mitla, Monte Alban, and others. This is situated on the exterior wing of the third floor. In two of the galleries of the first floor are kept the monolithic monuments, which are so heavy that they could not be exhibited in any other part of the building. In one of the rooms on the second floor are kept all the codexes, originals and copies, all arranged in perfect order.

HISTORY.

This department consists of four "salones," situated in the principal inner section of the third floor, in which are exhibited many interesting objects, together with the portraits of all the viceroys of New Spain, the leaders of the war of independence; the heroes of the reform period; one of the Emperor MAXIMILIAN and of his unfortunate consort, CARLOTTA; of the principal conquistadores; of the most renowned missionaries of the Spanish period; of the archbishops and bishops; in fact, of all those who have played an important part in the making of Mexico's history; a large collection of decorations, from those granted by the Colonial Government to those granted by General DIAZ; a valuable numismatic collection with many curious coins and medals; many insignias; and a large collection of arms belonging to the warriors of every epoch of the nation, both vice-regal, imperial, and republican.

ETHNOLOGY.

This department occupies almost the entire second floor and contains mostly objects strictly related to the aborigines—such as plaster casts of heads, hands, and feet; dress, furniture, chattels, etc.;



54
TLAHUIZCALPANTECUHTLI.
(EL LUGERO DEL ALBA.) CABEZA
COLOSAL DE DIORITA ENCONTRADA EN
UNA CASA DE LA CALLE DE SANTA
TERESA, Y DONADA AL MUSEO POR
LAS MONJAS DE LA CONCEPCIÓN,
POR INTERVENCION DE DON CARLOS
MARÍA DE BUSTAMANTE.

TLAHUIZCALPANTECUHTLI (THE MORNING STAR).

This is a colossal head of diorite, exquisitely carved. It is 3 feet high by 2 feet through the neck and about 7 feet in circumference. It was found in 1830 in a house in Santa Teresa street, Mexico City, and was donated to the National Museum by the Nuns of the Conception.

photographs and oil paintings; industrial products, and ethnological maps, all classified in a similar manner to those in the department of archæology.

INDUSTRIAL RETROSPECTIVE ART.

This department consists of five "salones," and was created only recently by LIC. GARCIA. In the first salon are exhibited a series of oil paintings representing the costumes worn by the citizens of different epochs in the nation's history, from the time of CORTEZ down. In the second salon are six large glass cases in which are exhibited objects of iron, jewels, costumes, military objects, etc. In the third

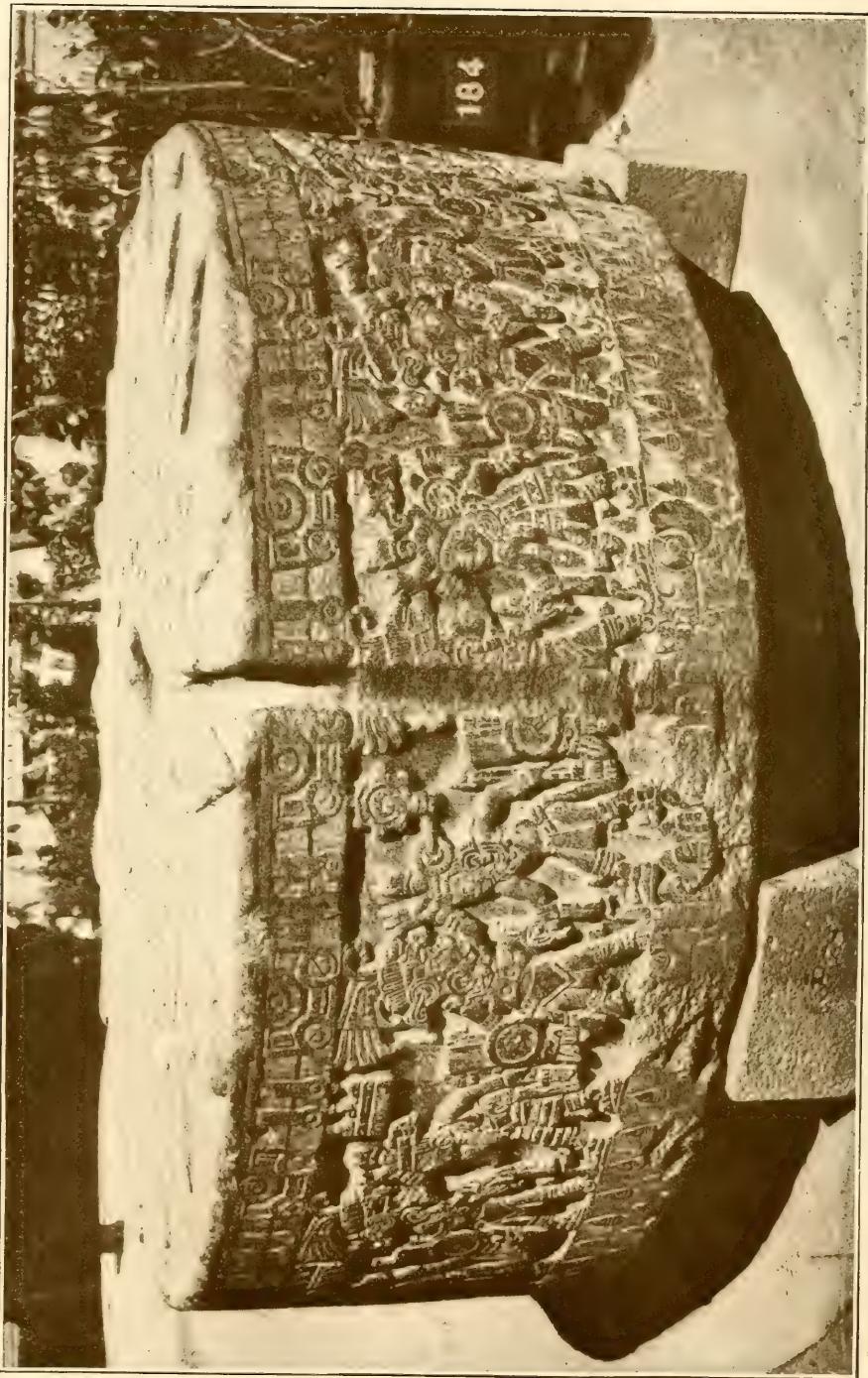


CHAC-MOOL, THE GOD OF FIRE.

This is a recumbent figure of stone, with both hands holding upon the stomach a round disk as an emblem of the sun. This particular Chac-Mool was found in Yucatan, but the National Museum contains other and similar figures found in various parts of the Republic.

salon are three large glass cases in which are to be found dining-room articles, all grouped according to classes, among which will be found part of the magnificent table service of the Emperor MAXIMILIAN. In the fourth salon MAXIMILIAN's royal carriage is exhibited, as is his road carriage. Close by is the coach which belonged to JUAREZ, the restorer of the Republic, in which he traveled when pursued by the Imperialist armies. The fifth salon contains many objects of high artistic value.

This department is at present preparing a number of magnificent albums, each to consist of 125 pages, which will contain photographs of the public buildings erected during the colonial period, and of



Courtesy of the National Geographic Magazine.

THE SACRIFICIAL STONE.

the furniture used in some of the convents and by the forefathers of the present generation. These albums are being prepared in commemoration of the Centennial.

PUBLICATIONS.

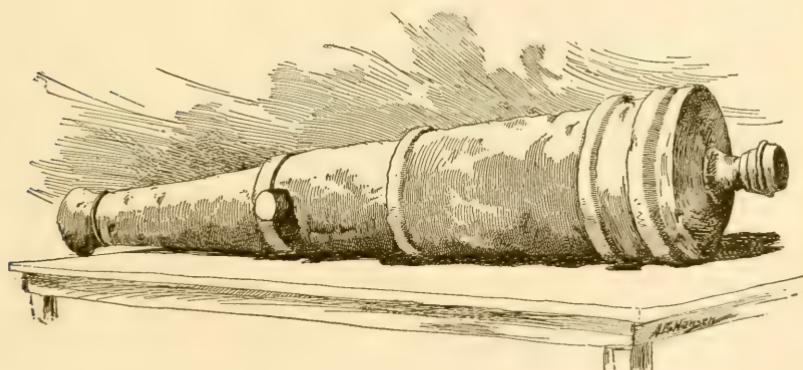
This department, which is one of the most important in the museum, has charge of all the documents which are printed relative to it. It is at present preparing, in commemoration of Mexico's centennial, which will begin in September, a number of volumes which will treat of the different plans which were formulated for the country's emancipation from Spain, the operations of the war initiated by HIDALGO, the newspapers and other documents published by the insurgents, and interesting documents relative to Mexico's heroine of the war of independence, LÆONA VICARIO.

The department of publications has printed some very interesting books relative to the history and archæology of Mexico, which space forbids mentioning in detail, but which may be procured by writing to the director, LIC. GENARO GARCIA, Museo Nacional, Mexico, D. F.

LIBRARY.

The library is situated on the lower floor, a few steps from the main entrance, and the books which it contains are classified in perfect order, so that it is an easy matter for the person wishing to look up any certain point in history, archæology, or ethnology to get full and complete data at very short notice.

The writer is indebted for much of his data to LIC. GENARO GARCIA, the director of the museum, and to Señor M. JIMENEZ DE SANDI.



PRESENTATION OF THE CULLUM MEDAL TO THE ARGENTINE SCIENTIST, DR. F. P. MORENO

THE tenth Cullum medal presented by the American Geographical Society of New York was received by Dr. FRANCISCO P. MORENO, the eminent Argentine geographer and scientist, in September, 1909. The name of Doctor MORENO is thus added to the illustrious list comprising Commander PEARY, Dr. F. NANSEN, Dr. C. MENDENHALL, Dr. A. G. SMITH, the Duke

of the Abruzzi, Dr. SVEN HEDIN, Dr. G. VON NEUMAYER, Dr. ROBERT BELL, and Prof. WILLIAM N. DAVIS.

The presentation was made by the Minister from the United States in Buenos Aires, who, in delivering it to its distinguished recipient, paid high tribute to his achievements in the field of his endeavors.

In replying, Doctor MORENO acknowledged his debt of courtesy not only to

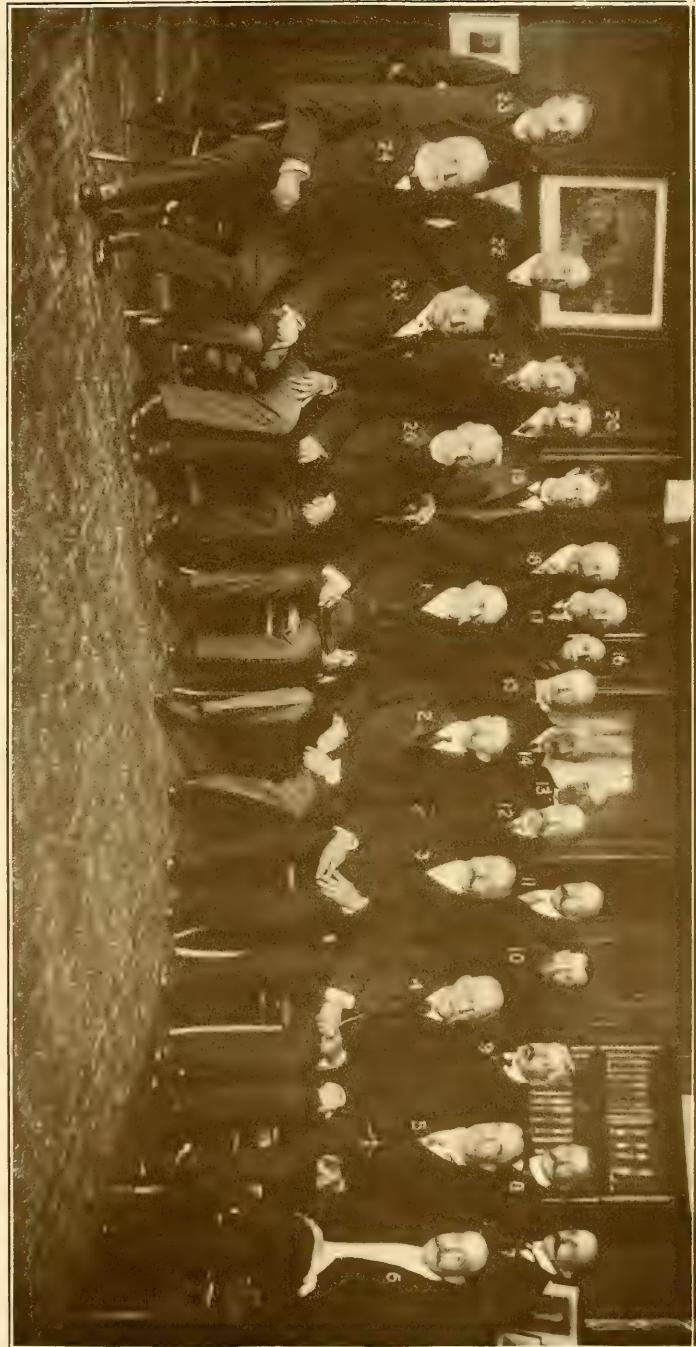


[Obverse.]

(Courtesy of the American Geographical Society.)

THE CULLUM GEOGRAPHICAL MEDAL, PRESENTED BY THE AMERICAN GEOGRAPHICAL SOCIETY TO DR. FRANCISCO P. MORENO, THE DISTINGUISHED ARGENTINE GEOGRAPHER AND SCIENTIST.

the society making the presentation, but also to the institutions in the United States of whose researches he had been able to avail himself when making independent expeditions.



Courtesy of the American Geographical Society

GROUP OF PROMINENT ARGENTINE SCIENTISTS AT THE PRESENTATION OF THE CULLUM MEDAL TO DR. FRANCISCO P. MORENO
IN BUENOS AIRES, ARGENTINA, SEPTEMBER, 1909

1. DR. Francisco P. Moreno.
2. Hon. Charles H. Sherrill, United States Minister to Argentina.
3. Engineer Otto Krause, Dean of the Faculty of Exact Physical and Natural Sciences, President of the Scientific International American Congress of 1910.
4. Engineer Luis A. Illuergo, ex-Dean of the Faculty of Exact Physical and Natural Sciences and ex-President of the Scientific Society of Argentina.
5. Engineer C. Schneiderwind, Director of the Section of Means of Communication of the Ministry of Public Works of the Nation.
6. Engineer Vicente Castro, President of the Argentine Scientific Society.
7. DR. Ernest Nelson, Director of the Pedagogical Museum of Buenos Aires.
8. Engineer Henry Wolff, Chief of the Hydrographical Section of the University of Buenos Aires.
9. DR. Juan B. Ambrosetti, Director of the Ethnographic Museum of the University of Buenos Aires.
10. DR. Fernando Lahille, Director of the Hunting and Fishing Section of the Department of Agriculture.
11. DR. Angel Gallardo, ex-President of the Argentine Scientific Society.
12. DR. Alejandro Rosa, Director of the Mitre Museum.
13. Mr. Federico Terrero.
14. DR. James Roth, Director of the Geological Section of the La Plata Museum.
15. DR. Francisco Porro de Somenzi, Director of the Astronomical Observatory of La Plata.
16. Mr. José Moreno.
17. DR. Walter A. Davis, Director of the Argentine Meteorological Bureau.
18. Engineer Eduard Arrieta, Professor of Geology of the National University of Buenos Aires.
19. Mr. Luis María Torres, Director of the section of the Mitre Museum.
20. DR. Daniel Moreno.
21. Mr. Clemente O'Neill, Director of the Zoological Garden.
22. DR. Eduardo Moreno.
23. DR. Juan José Bidaut, General Recorder of the Nation.
24. DR. Runno Varela.
25. DR. Estanislao S. Zeballos, Founder and ex-President of the Argentine Scientific Society and of the Argentine Geographic Institute.
26. DR. Florentino Ameghino, Director of the National Museum of Natural History.

He also referred to the fact that the approaching sessions of the International American Scientific Congress to be held during the centennial year (1910) in the Argentine capital will be followed in the ensuing year by the Washington meeting. In this interchange of visits between the scientists of North and South America, Doctor MORENO foresees one of the most potent portents of the mutual interests which shall animate the future relations of the Continent, and he expresses the hope that thoroughly representative men may be chosen for participation at both gatherings.

Doctor MORENO has made extensive explorations in the Andean region and in Patagonia, his journeys covering many thousands of

miles of practically unknown country, in the course of which many new rivers, lakes, and mountains were discovered.

Of particular interest is his discovery of the remains of the Pampean Mylodon, or Giant Ground Sloth, at Last Hope Inlet in 1897. The remarkable state of preservation in which the remains of this supposedly extinct mammal were discovered led investigators



[Reverse.]

(Courtesy of the American Geographical Society.)

THE CULLUM GEOGRAPHICAL MEDAL, PRESENTED BY THE AMERICAN GEOGRAPHICAL SOCIETY TO DR. FRANCISCO P. MORENO, THE DISTINGUISHED ARGENTINE GEOGRAPHER AND SCIENTIST.

to credit the belief that some of the species might still exist in the mountainous regions of Patagonia.

On the other hand, Doctor MORENO is of the opinion that the favorable conditions of climate and soil in its vicinity are responsible for the preservation of the remains.

Doctor MORENO is the founder of the La Plata Museum, of which he was the director from 1877 to 1906, and which houses many of the results of his expeditions. It is the hope of the founder that the institution may eventually take rank with the Smithsonian Institution at Washington.

COMMERCIAL CONDITIONS IN THE LATIN-AMERICAN REPUBLICS

THE difficulty of obtaining accurate information as to the best modes and routes of travel throughout the Central and South American countries is one of the reasons why American merchants have heretofore hesitated in arranging to send their representatives to this fertile field of trade.

It is erroneously supposed that the expense incident to such a trip would be greater than that of a similar trip conducted throughout the United States. However, it can be stated generally that on a prolonged trip the incidental expenses would be lower than if traveling in the United States. It is estimated that the sum of \$5 or \$7 per day will be sufficient for all ordinary expenses, including railroad and steamship fare, but it is supposed that the traveler will carry little luggage and will avoid being overcharged. Of course a knowledge of the language spoken in these countries would help in keeping down expenses. Trunks taken on a prolonged trip throughout South America should not weigh more than 125 pounds, and it is recommended that not more than 100 pounds be carried on excursions taken into the interior with mules.

The best season of the year to visit the west coast of South America is during our spring and summer months, for it is then warm during the day and cool at night. It may be generally stated that the seacoast sections of the countries near the equator are generally unhealthful, but the interior cities as a rule present the most favorable climatic conditions. Travelers who contemplate entering the higher altitudes should take the precaution to be well supplied with heavy clothing and should be prepared to suffer from *soroche*, the mountain sickness, when they pass a height of 8,000 feet. The incidental unpleasantness of this sickness disappears within a few days.



MR. JOSEPH R. DARLING.

As a general statement, it can be said that sanitary conditions are good in the larger cities, but in some of the smaller ones much improvement could be effected along these lines. The food is well cooked in the Spanish style and very palatable. As a precautionary measure water should not be drunk unless previously boiled, and the same suggestion is made in regard to milk.

The native of these countries is always polite, and his courtesy to the foreigner is proverbial. Such consideration for the stranger is found not only among the higher and more cultivated people, but also in the people of the poorer classes. These people are, as a rule, peaceful, and the traveler should have no fears of being molested as long as he goes about his own business and does not involve himself in local political antagonisms.

There has been considerable improvement in the steamship service to these countries from the United States, but we are still behind our European competitors in this matter. However, the traveler making a trip, including the east coast of Central America and the west coast of Central and South America, will find better transport facilities starting from New Orleans. It is to be regretted that the United States has not any better direct communication with Central and South America.

The present period offers more opportunities to our merchants for the development and encouragement of trade relations with Latin America. Merchants and manufacturers of the United States have been slow to arrive at a proper appreciation of this rich field for exploiting their goods, and it is only recently that they have come to an understanding of the value and importance of these markets. However, to-day many are striving to overcome results of past indifferences. The merchant of Latin America will trade with those countries which offer him the most favorable terms and the best articles. The European merchant has perhaps some advantage in dealing with these countries because of superior transportation facilities. Again, the high freight rates charged by the Panama Railroad Company have been a serious obstacle confronting American exporters, and it is said that certain lines operating out of New York have combined to keep up freight rates on South American exports.

Owing to our favorable geographical position and perhaps other circumstances, the United States does a larger business with Mexico, Cuba, and Porto Rico, but we also enjoy the advantage of geographical situation as compared with Europe, so there is every reason why American merchants should compete successfully with the foreigner for the Latin American market.

It is the general idea with American manufacturers that difficulties are to be met with in obtaining payments for goods sent into Central and South America, but this is incorrect, as the firms of high standing

in these countries are as honorable in settling their commercial obligations as their brothers of other countries. It is unfortunate that reliable foreign reports of commercial houses are harder and more expensive to obtain than domestic ones. It is the custom with European houses dealing in South America to extend longer terms of credit than would seem necessary to an American, but the reason of this is that deferred payments draw interest at the rate of 5 per cent, which is higher than the usual rate obtained for money abroad.

The usual method of arranging for goods shipped to Latin America is that of making a draft, with the bill of lading, freight bill, and similar documents attached, and negotiating this bill through some banking institution. Business of this character will be greatly facilitated when the proposed Pan-American Bank is established, with its branches situated in the principal cities of Central and South America.

In conclusion, it may be said that these countries present great opportunities for the exploitation of all kinds of American goods, and prices will always provide sufficient profit to fully compensate for the extra expense incidental to complying with extraordinary conditions in local markets, and the American merchant would do well to study the method of shipping and packing as practiced by his rivals across the seas.



STEAMSHIP AT GALVESTON LOADING FLOUR FOR PANAMA.

ESPERANTO IN PAN- AMERICA :: :: :: ::

IN view of the effort that is now being made to popularize Esperanto and to use it in the improvement of trade relations between different countries, especially North and South America, the BULLETIN publishes the following brief statement made by Mr. JAMES W. CHENEY, Librarian of the War Department. The United States consul at Chemnitz, Saxony, says:

The importance of Esperanto as a factor in simplifying and facilitating international commerce is apparent and the number of clerks able to use the language with ease is growing at a rapid rate.

This is easy to understand when one discovers that Esperanto is a language with few rules, no exceptions, no irregular verbs, with a system of pronunciation, accent, and spelling that can be mastered in fifteen minutes, with a vocabulary ingeniously selected from the most familiar roots of the most widely used modern languages, and with a remarkably easy system of prefixes and suffixes that reduces the necessary roots to one-tenth the number required in any other language. The simplicity and practical utility of Esperanto have been repeatedly tested in a way impossible to apply to any other language. When a correspondent thinks that his addressee may not be familiar with the international tongue, he simply incloses an Esperanto key (weighing only 5 grams) printed in the language of the addressee, who can then with very little trouble read the letter and *reply in Esperanto*.

The Pan-American Scientific Congress at Santiago de Chile, in January, 1909, declared its approval of Esperanto as a neutral international language

of special interest to America, the future field of action of the two great civilizations (Spanish speaking and English speaking) which confront each other politically and commercially.

According to the Peruvian Esperanto gazette, *Antauen Esperantistoj*, Esperanto propaganda is carried on in all the South American States. The Government of Brazil has officially recognized the new international language in its decision to have the report of the National Exhibition of 1908 printed in three languages—Portuguese, French, and Esperanto. Referring to this trilingual report, the *British Esperantist* (August, 1909) says:

The preface alone, ably written in Esperanto, forms a most interesting 50-page pamphlet, and contains much valuable information as to the commercial

resources and social development of the Republic. It is worthy of note that S^{RO} MARQUES DE OLIVEIRA, who took up Esperanto specially for that purpose, wrote the report after only a few months' study of the language.

In view of the present strength and rapid development of this language, the progress of which will receive an added impetus from the Sixth Annual Congress of Esperantists, to be held in Washington next August, the practical advantages of Esperanto in trade relations will soon be thoroughly appreciated by the most progressive business houses of the western world.

THE SANITARY CONVENTION AT SAN JOSÉ, COSTA RICA

THE Fourth International Sanitary Convention of American Republics was held at San José, Costa Rica, beginning December 25 and closing its sessions on January 3, 1910. Twelve republics were represented as follows: Chili, Colombia, Costa Rica, Cuba, Guatemala, Honduras, Mexico, Nicaragua, Salvador, United States of America, and Venezuela.

The inaugural session, held at the National Theater December 25, was attended by the President of the Republic of Costa Rica and his cabinet and the Chief Justice of the Supreme Court. The preliminary program, as previously published, was carried out in its entirety.

Sanitary reports from the various countries were received, interesting discussions upon matters relating to sanitation, measures against plague and yellow fever, vital statistics, and uniformity in bills of health issued to vessels, and other matters of general hygienic interest to all the republics were fully discussed and pertinent resolutions were adopted.

Dr. Maximo Cienfuegos, President of the Superior Board of Hygiene of Chili, was elected President of the next Convention, which, in response to an invitation from the President of Chili, it was determined to hold two years hence in Santiago, Chili.

The hospitalities extended to the delegates were numerous and marked by elegance and refinement.

In every respect, including the character of the work performed, the Convention sustained the high standard of those that preceded it.

SUBJECT MATTER OF CONSULAR REPORTS

REPORTS RECEIVED TO JANUARY 1, 1910.

Title.	Date of report.	Author.
ARGENTINA.		
Public debt of Argentina.....	Oct. 11	R. M. Bartleman, consul-general Buenos Aires.
New steamship line between Austria and Argentina...	Oct. 13	Do.
New steamship line between the Levant and Argentina...	Oct. 18	Do.
Experiments with sugar cane.....	Oct. 20	Do.
TRADE NOTES.—Population of Buenos Aires on Sept. 30 estimated at 1,214,646; third census being compiled will show that the city has at least 1,285,000 people; number of cattle slaughtered, loaves of bread baked, passengers carried on electric railways, spectators at theaters, immigrants arriving, value of real estate, and amount of eggs, fish, and poultry consumed in Buenos Aires during September, 1909; new steamship pier at Concordia opened on Sept. 30; the telephone company of the Chubut authorized to establish lines between the Patagonian towns of Rawson, Trelew, Puerto Madryn, and Gaiman; new 16-knot steamer placed on route from Buenos Aires to Punta Arenas, via leading Patagonian ports; number of llamas, guanacos, vicuñas, and alpacas in Argentina in May, 1908; number of guanaco skins exported to Germany and England and live llamas exported to Bolivia in 1908.	Oct. 29	Do.
Railways in Argentina; sale of Andina Railway.....	Nov. 4	Do.
Résumé of foreign commerce for first nine months of 1909.	Nov. 8	Do.
TRADE NOTES.—Largest number of immigrants on one day arrived at Buenos Aires Oct. 30; the railway department authorized to construct line between Diamante and Crespo, survey line from Curuzú Cuatiá to unite with line from Monte Caseros to Posadas, and for line from port of Paraná to María Grande; Province of Mendoza had 203,000 inhabitants in September; 47,150,384 passengers and 32,211,007 tons of freight carried on Argentine railways in 1908; movement of passengers increased 25 per cent from 1906 to 1908; number of passengers carried from Jan. 1 to Sept. 30 on the five street-car lines in Buenos Aires; exports from Argentina for first ten months of 1909 and comparison with same period of 1908; amount realized from sale of land in Buenos Aires from Jan. 1 to Sept. 30; output of three gas companies for first nine months of 1909; imports of bullion; favorable crop notices from the wheat and linseed zones; decree regulating national alfalfa competition; on Oct. 29, 1909, 336 kilometers of the new Rosario-Puerto Belgrano Railway were finished.	Nov. 9	Do.
BRAZIL.		
Brazilian finances.....	Oct. 20	J. J. Slechta, deputy consul-general, Rio de Janeiro.
Brazilian national library building.....	Oct. 25	Do.
Dry farming and irrigation in Brazil.....	Oct. 28	Do.
Incorporation of foreign banks in Brazil.....	Nov. 10	Do.
Trade of Brazil for first nine months of 1909.....	Nov. 12	Do.
Dock charges in Rio de Janeiro	Nov. 13	Do.
Reorganization of Brazilian postal service.....	Nov. 15	Do.
NOTES.—Change in law providing lands for immigrant settlers urged by Minister of Agriculture; plans completed for establishment in Rio de Janeiro of a national agricultural school; experiment station started in suburbs, with a breeding farm; bill before lower House of Congress for reorganization of the Acre Territory; report on cotton industry in State of São Paulo; reduction by steamship lines on fruits, milk, and vegetables exported to Europe; proposal by director of the Central Railroad of Brazil to send four mechanics every six months to work in locomotive factories of the United States.	Nov. 16	Do.
CHILE.		
Construction of longitudinal railway.....	Oct. 30	A. A. Winslow, consul, Valparaiso.
Shipping facilities between the Atlantic coast of the United States and Europe and the west coast of South America.	Nov. 1	Do.

Reports received to January 1, 1910—Continued.

Title.	Date of report.	Author.
CHILE—continued.		
Law regulating fees to be collected by Chilean consular officers.	Nov. 5	A. A. Winslow, consul, Valparaiso.
Business conditions and outlook.	Nov. 15	Do.
Trade and industrial notes.	...do....	Do.
COLOMBIA.		
Law No. 29, of 1909, authorizing the Government to contract for opening of "Bocas de Ceniza."	Oct. 28	Eugene Betts, vice and deputy consul-general, Bogota.
Contemplated removal of bar from mouth of the Magdalena River.	Nov. 9	C. C. Eberhardt, consul, Barranquilla.
Removal of import duties on natural products of Venezuela, entered through custom-house at Cucuta, Colombia.	Nov. 19	Do.
Local representation in Colombia of American exporters by resident agents.	...do....	Do.
Increase in import duties on oil for motors, etc.	Nov. 25	Do.
COSTA RICA.		
Change in customs tariff of Costa Rica.	Nov. 15	S. T. Lee, consul at San Jose.
Importation of coal.	Nov. 30	C. Donaldson, consul at Port Limon.
CUBA.		
Cuban customs laws governing importation and re-exportation of samples of commercial travelers.	Nov. 16	J. L. Rodgers, consul-general, Havana.
Importation and sale of coal in Cuba.	Nov. 20	Do.
ECUADOR.		
Abolition of special courts for adjustment of claims in mercantile cases.	Nov. 23	R. B. Jones, vice - consul - general, Guayaquil.
HONDURAS.		
Timber and turpentine concession.	Nov. 7	Samuel McClintock, consul, Tegucigalpa.
Public debt of Honduras.	Nov. 10	Do.
Farming in Honduras.	Nov. 11	Do.
Budget of Honduras for fiscal year Aug. 1, 1909, to July 21, 1910.	Nov. 18	Do.
Importation and sale of coal in Latin America.	Nov. 22	Drew Linard, consul, Ceiba.
Importation and sale of coal in Latin America.	...do....	Wm. E. Alger, consul, Puerto Cortes.
Mining claims vacated in Honduras.	Nov. 24	Samuel McClintock, consul, Tegucigalpa.
MEXICO.		
Henequen in Veracruz.	Nov. 1	Wm. W. Canada, consul, Veracruz.
New telephone system in Veracruz.	Nov. 18	Do.
Monetary changes in Mexico.	Nov. 20	T. W. Voetter, consul, Saltillo.
Importation and sale of coal.	Nov. 22	Geo. B. Schmucker, consul, Ensenada Lower California.
Agriculture and lumbering in State of Chihuahua.	Nov. 24	L. J. Keena, consul, Chihuahua.
Importation and sale of coal in Latin America.	...do....	A. T. Haebler, consul, Manzanillo.
Uniformity in size of catalogues.	Nov. 27	Do.
How change from silver to gold basis was effected by Mexico.	...do....	Wm. W. Canada, consul, Veracruz.
Ores in Mexico.	Nov. 30	L. T. Ellsworth, consul, Ciudad Porfirio Diaz.
NICARAGUA.		
Report of 1909-10 coffee crop in western Nicaragua.	Oct. 20	Henry Caldera, vice-consul, Managua
Executive decree declaring victuals free of import duty.	Oct. 21	Do.
Decree of finance.	Nov. 7	Do.
PANAMA.		
Pamphlet entitled "Chiriqui; resources and prospects".	Nov. 30	C. E. Guyant, vice and deputy consul-general, Panama.
URUGUAY.		
Some reports of Uruguay.	Oct. 31	F. W. Goding, consul, Montevideo.
VENEZUELA.		
Cost of electric lighting in Venezuela.	Oct. 29	Isaac A. Manning, consul, La Guaira.
Establishment of bimonthly steamship service between Ciudad Bolivar and Maracaibo, including intervening ports.	Oct. 30	Do.
Proposed intercontinental telegraph service.	Nov. 3	Do.
Garden hose in Venezuela.	Nov. 5	Do.
Tariffs of navigation company on upper Orinoco River.	Nov. 8	Do.
Imports and exports from Jan. 1 to June 30, 1909.	Nov. 11	Do.
Exploitation of fibers.	Nov. 15	Do.
Telegraphic communication between Venezuela and Ecuador.	...do....	Do.
Port charges of sanitary officer, quarantine, etc.	...do....	Do.
Lease of salt monopoly to local steamship company.	Nov. 16	Do.

ARGENTINE REPUBLIC

COMMITTEE FOR THE MEDICAL CONGRESS AT BUENOS AIRES.

The Department of State of the United States has been informed by Minister SHERRILL at Buenos Aires of the appointment of a committee of United States citizens resident in that capital to serve in connection with the International American Congress of Medicine and Hygiene to be held in 1910.

This committee will render all assistance possible to the Argentine committee in charge of the Congress and will be available for the service of delegates from the United States. Minister SHERRILL in reporting the matter states that his action seems to be much appreciated by the Argentine authorities.

SALE OF THE ANDINE RAILWAY.

The Argentine Government, acting under authority of Congress, consummated in November, 1909, the sale of the Andine Railway to the Pacific Company and the Argentine and Great Western railways, the consideration being \$12,024,320, or \$27,328,000 national money. The property was delivered on November 5, the purchasing companies becoming responsible for the existing obligations and contracts relating to the exploitation of the line pending at the time of the transfer.

RAILWAY NOTES.

The Buenos Aires Great Southern Railway, in its report for the year 1908-9, shows gross receipts of £4,649,499 and working expenses £2,531,193, with net receipts amounting to £2,118,306. In gross receipts a gain of 4.66 per cent over the preceding year is noted; in working expenses 2.31 per cent increase, and in net receipts 7.62 per cent. The monetary advance over 1907-8 in net receipts was £150,020. The average number of miles open to traffic was 2,716 and the number of passengers carried 15,865,200. Merchandise transported reached a total of 4,852,379 tons, an increase of 42,535 tons as compared with the previous twelve months.

The year's report of the Entre Ríos Company shows gross receipts of £366,580, an increase of £65,893, or 21.91 per cent, net receipts showing an advance of £22,198 over the £134,249 during 1907-8.

The total number of passengers carried by Argentine railways during 1908 was 47,150,384, and of cargo 32,211,007 tons were transported. During the past ten years merchandise traffic has increased 22 per cent.

NEW STEAMSHIP SERVICES.

United States Consul-General R. M. BARTLEMAN, of Buenos Aires, announces the following new steamship services of the Argentine Republic:

A weekly steamship service between the Piræus, Greece, Boston, and Buenos Aires, by way of Alexandria, Egypt, was inaugurated on October 16, 1909, by the sailing on that day of the first vessel from the Piræus. It is expected that the new line will do much to increase the growing trade, and also the large third-class traffic between the Levant and the Argentine Republic.

A fifteen-year contract was signed on October 13 by the Austrian Government and the Austro-American Steamship Company, according to the terms of which this company will inaugurate, on January 1, 1910, a rapid service between Trieste and Rio de Janeiro, Santos, Montevideo, and Buenos Aires.

Realizing the growing importance of the trade of Buenos Aires with the Patagonian territories of Argentina, the Nicholas Mihanovich Steamship Company has placed a large, new, 16-knot steamer, the Sarmiento, on the route from Buenos Aires to Punta Arenas, Chile, via the leading Patagonian ports. It is expected that this new vessel, which has a depth of $17\frac{1}{2}$ feet in the hold, a length of $329\frac{1}{2}$ feet over all, with 40 feet beam and 4,000-horsepower, triple-expansion engines, will be able to make the run from Buenos Aires to Punta Arenas in seven days. The steamer can carry 170 first and 100 third class passengers; no second class are carried. Later it may be used for excursions to the Falkland Islands.

PATENT AND TRADE-MARK REGULATIONS FOR THE CENTENNIAL EXPOSITIONS.

The following law has been promulgated for the protection of the patents and trade-marks of exhibitors who participate in the centennial expositions to be celebrated in Buenos Aires, Argentine Republic, during the year 1910:

ARTICLE 1. The inventors of patentable inventions, the owners of trade-marks, or the lawful successors of said inventors and owners, who participate in the expositions that will be held in 1910 in honor of the centenary of our political emancipation, shall enjoy the privilege of the monopoly of their invention or trade-mark throughout the Republic, without other requisite than communicating the details and sending the drawings of said patents and trade-marks to the Patent and Trade-Mark Office in the Department of Agriculture.

ART. 2. The privilege expires six months after the closing of the exposition, should the owner of the invention fail to solicit his patent or the owner of the trade-mark not register the same in the manner prescribed by existing laws.

HARBOR IMPROVEMENTS.

The Government of the Argentine Republic has called for tenders for the construction of commercial harbors for seagoing vessels at Mar del Plata, and Quequen in the Province of Buenos Aires. The estimated cost of these improvements is \$15,000,000 gold. The proposals of plans will be opened on May 14 and the tenders on May 16, 1910. A charge of \$100 national money (\$44) will be made for details of the surveys of the two harbors on which to base bids.

THE SUGAR INDUSTRY.

The total area under cane in the Argentine Republic is 67,000 hectares, of which 57,000 are located in the Province of Tucuman. The invested capital recorded for the province is \$47,000,000, and the possible output 150,000 tons of sugar and 15,000,000 liters of alcohol annually.

The actual production falls somewhat below this quantity, 136,485 tons representing the output in 1908 according to the ultimate report, being somewhat larger than the previous estimate.

In the seventeenth century the industry was introduced from Peru, but modern machinery was not installed until 1859. The area under cultivation has grown from 2,290 hectares in 1874, and parallel with the increase the value of the land under culture has advanced from \$200 to \$1,000 per hectare.

According to official data recently published, the year's production of sugar in the Argentine Province of Tucuman, up to September 30, 1909, was 97,000 tons, as compared with 120,000 tons for the same period of the previous year. The sugar cane ground during the grinding season of 1909 was 1,648,045 tons, as compared with 1,533,886 ton, during the same period of 1908.

There are 28 sugar-cane plantations in the State of Tucuman, and a steady increase is noted from year to year in the quantity of cane ground and sugar produced in this great and rapidly developing sugar-cane growing State.

THE UNIVERSITY OF BUENOS AIRES.

The report of the rector of the University of Buenos Aires, covering the scholastic year 1908-9, shows that the university has now 4,364 students, thus divided: Faculty of law and social sciences, 1,051; faculty of philosophy and letters, 210; faculty of medicine, 2,501; faculty of exact physical and natural sciences, 602; total, 4,364. The most important event during the year was the incorporation of the National Agronomic and Veterinary Institute, which was founded in 1904, with the university, the new faculty of agronomic and veterinary sciences being created. Its importance is expected to rapidly increase as the exponent of the latest and most scientific methods of developing what are, and will be for many years to come, the greatest sources of Argentine national wealth. A very complete course of study is being prepared, and everything is being done to strengthen the teaching staff and the opportunities for the practical education of the students.

During the next few years the university will be almost entirely rebuilt. Plans are now being prepared for the new sciences building, which will probably be finished in four years; the law school is shortly

to erect a large quadrangle on the outskirts of Buenos Aires (the university buildings are not all grouped together, as is often the case in the United States), while the new José de San Martin Polyclinic will be a most important addition to the recently enlarged medical school.

NATIONAL BIBLIOGRAPHIC OFFICE.

An executive decree of November 10, 1909, establishes a "National Bibliographic Office" at Buenos Aires, modeled after the system of the International Institute of Bibliography at Brussels. The new office will be cooperative and international in character and will collect and catalogue the literature and documentary history of the Republic along all lines of historic study and scientific investigation. The office will cooperate as closely as possible with the Brussels Institute and other similar organizations, and in due time will issue publications showing the work accomplished and outlining for the future what it proposes to do in this special field of endeavor. **MR. FEDERICO BIRABEN**, a civil engineer, has been appointed director of the office.

SECOND INTERNATIONAL CONGRESS OF AMERICAN STUDENTS.

On July 15, 1910, the Second International Congress of American Students, organized by the University Federation, will convene in Buenos Aires. The Congress will be divided into sections, and the members are invited to submit papers and take part in the proceedings. The complete programme is not yet available, but full information may be obtained upon the subjects relating to medicine, pharmacy, and odontology by addressing the "Círculo Médico," Corrientes Street 2038, Buenos Aires, Argentine Republic.

BRITISH INVESTMENTS IN THE REPUBLIC.

At the close of the year ended June 30, 1909, British investments in the Argentine Republic were recorded to the amount of £23,522,816. In this sum railways represent £14,917,090; government securities, £5,044,926; and other securities, £3,560,926.

SANITARY IMPROVEMENTS AT BUENOS AIRES.

The President of the Republic has been authorized by the Congress to expend 18,000,000 pesos (\$7,875,000) to improve and extend the sanitary system of Buenos Aires. These improvements will include the construction of a new tower and outlet tunnel at Palermo, filters and settling tanks, pumps and new buildings, and similar improvements.

UNDERGROUND TRAMWAY IN BUENOS AIRES.

The Western Railway (Limited), of Buenos Aires, has been authorized to extend its tramway lines from Sadi-Carnot street, in the

metropolis of the Republic, in such manner as to necessitate the construction of a tunnel under Bartolome Mitre street, the Eleventh of September square, Rivadavia, Entre Ríos, and Mayo avenues, Mayo Plaza, Paseo de Julio, and Avenida Rosales, at which point it will emerge from the tunnel and continue on the surface until it connects with the lines of the port of the capital. That part of the line which runs through the tunnel and the principal thoroughfares will have a double track. Construction is to be commenced within six months, and the entire line must be completed within a period of four years.

EXTENSION OF TELEPHONE SERVICE IN CHUBUT.

The Chubut Telephone Company has been authorized by the Federal Government to establish telephone communication between the towns of Rawson, Trelew, Port Madryn, and Gaiman, the installation to be completed and the line opened to public service within a year from October 9, 1909. The concession is valid for thirty years, at the expiration of which time the line, with all its appurtenances, shall become the property of the State.



COMMERCE, FIRST HALF OF 1909.

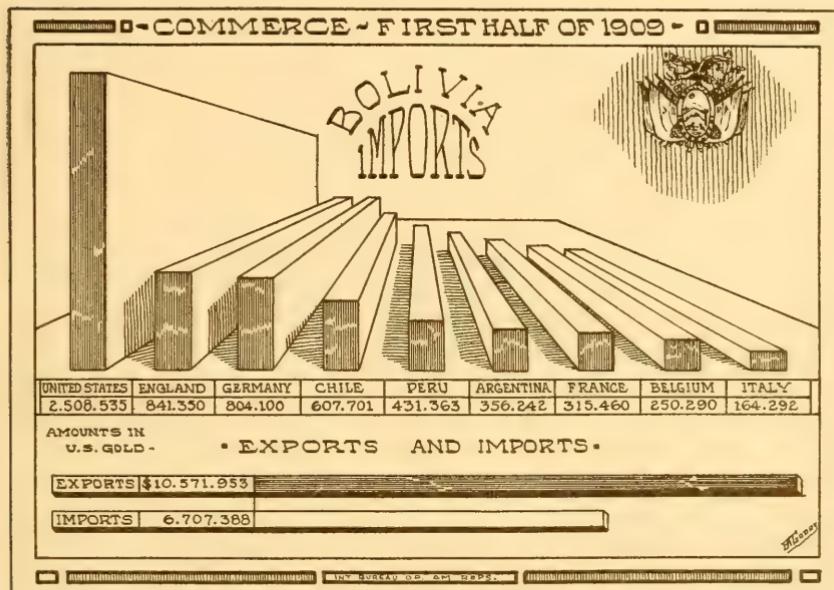
The exports of the Republic of Bolivia, through the custom-houses of La Paz, Oruro, Uyuni, Tupiza, Tarija, Villa Bella, Puerto Suarez, San Matias and Bahia, for the first half of 1909 consisted of mineral products aggregating 19,835,786 kilograms, valued at Bs. 21,460,677 (\$8,584,000); vegetable products, 1,414,061 kilograms, valued at Bs. 4,720,404 (\$1,888,000); animal products, 143,001 kilograms, valued at Bs. 188,025 (\$75,210); manufactured products, 23,975 kilograms, valued at Bs. 35,125 (\$14,048), and live animals and miscellaneous products, 61,071 kilograms, valued at Bs. 25,651 (\$10,260), or a total of 21,477,895 kilograms, valued at Bs. 26,429,884 (\$10,571,953).

Tin comprised over half the exports for the period, figuring for 17,170,055 kilograms, valued at Bs. 17,382,249 (\$6,952,890), rubber and silver following, worth Bs. 4,550,631 (\$1,820,250), and Bs. 2,994,104 (\$1,197,640), respectively.

The imports for the same period consisted of 39,153,031 kilograms of merchandise, valued at Bs. 16,768,471 (\$6,707,388). The principal countries from which these imports were received is shown in the following table:

Country.	Bolivianos.	Gold.
United States	6,271,338	\$2,508,535
England	2,103,377	841,350
Germany	2,010,252	804,100
Chile	1,519,253	607,701
Peru	1,078,409	431,363
Argentina	890,605	356,242
France	788,650	315,460
Belgium	625,725	250,290
Italy	410,732	164,292

The principal items of imports were: General merchandise, Bs. 14,599,489 (\$5,839,795); sugar, Bs. 695,683 (\$278,273); flour,



STATEMENT OF THE EXPORTS AND IMPORTS OF THE REPUBLIC OF BOLIVIA FOR THE FIRST HALF OF THE YEAR 1909

Bs. 528,956 (\$211,582); provisions, Bs. 291,659, (\$116,663); candles, Bs. 101,583 (\$40,633), and beverages, Bs. 181,090 (\$72,436).

ESTIMATED RECEIPTS AND EXPENDITURES FOR 1910.

The Treasury Department of Bolivia estimates the total receipts of the Federal Government for 1910 at Bs. 13,408,425.80 (\$5,363,700). In this estimate import duties are calculated at Bs. 6,535,000 (\$2,614,000), or Bs. 465,000 (\$186,000) less than the receipts collected from this source in 1909. The income from exports of ores and rubber is estimated at Bs. 2,469,100 (\$987,600), as compared with the actual receipts from the same source in 1909 of Bs. 2,287,500 (\$914,800), the estimated increase from this item being largely due to the rise in the price of rubber.

The estimated expenditures of all the departments of the Government for 1910 are Bs. 13,408,258.68 (\$5,363,200), or Bs. 4,046,378.76 (\$1,618,400) less than those for 1909.

EXPORTS OF HIDES.

The Bolivian Congress is considering the advisability of placing an export duty on hides. The exports of hides and skins for 1907 and 1908 were as follows:

	1907.	1908.
	<i>Kilos.</i>	<i>Kilos.</i>
Vicuña skins.....	129	35
Alpaca skins.....	76	.....
Ox and cow hides.....	91,115	247,327
Sheepskins.....	27,381	.....
Goatskins.....	23,771	24,701
Chinchilla skins.....	.....	11,247
Tiger skins.....	.....	48
Perico skins.....	.....	18
Alpaca wool.....	309	.....
Wool (sheep).....	38,954	13,385
Sole leather.....	692	.....
Vicuña.....	750	865
Alpaca robes.....	112	.....

BANK OF THE BOLIVIAN NATION.

The Congress of Bolivia has authorized the establishment of the Bank of the Bolivian Nation (Banco de La Nación Boliviana) with a capital of £2,000,000 divided into 200,000 shares of £10 each. The Government will take 100,000 shares of the stock, purchasing the same with the proceeds of a foreign loan which it has been authorized to make especially for this purpose. The remaining shares may be subscribed in whole or in part by the public and by banks of issue now in operation.

The bank will commence business with the £1,000,000 invested by the Government plus the proceeds of such sales of the remaining stock as may be effected. It has the right to issue bank notes in the same proportion and manner as are conceded to existing banks by the laws of the country. The establishment in future of any other bank of issue is prohibited. All the receipts and expenditures of the Government are to be handled by the new bank, the credit balances to draw 6 per cent per annum and the debit balances to be charged for at the rate of 8 per cent per annum.

A reserve fund will be formed consisting of not less than 10 per cent of the semiannual profits of the institution. The dividends corresponding to the 100,000 government shares shall be used exclusively for the payment of the £1,000,000 loan with which said shares were purchased, until the debt is completely liquidated.

The bank must establish branches in all the capitals of departments, and may, if it deems expedient, have branches in other places. The President of the Republic will issue the rules and regulations governing the management and operation of the bank.



BRAZIL

PROPOSED IMMIGRATION LAW.

The Brazilian Congress has under consideration certain measures for the promotion of desirable immigration in the Republic, as embodied in a project of law recently submitted. The main provisions of the law are:

Voluntary immigrants (second and third class passengers of foreign nationality being so considered), who shall come at their own cost from abroad to Brazil, will receive the gratuitous concession of lots, measured and delimited in accordance with previous enactments, provided they constitute families and are agriculturists, in the colonial centers founded and maintained by the Union.

Immigrants meeting the above conditions, on embarking at the port of Rio de Janeiro, or any other national port which shall be indicated to them, must declare their intention of establishing themselves at their own expense in a central colony.

The general direction of the department in charge will take steps for the landing, lodging, and transport of such immigrants until their arrival at their destination; or, after they have selected their respective lots, a provisional title will be delivered to them, setting forth all the conditions of the concession and its value.

At the end of two-years' occupation of the property the title of the gratuitous concession will be delivered to the immigrants, provided they have inhabited the tracts and cultivated them continuously during that period and have put permanent structures thereon; also providing that they are not indebted to the Union for assistance or advances. If the conditions have not been met at the expiration of the two years, formal possession will be deferred until such provisions have been fulfilled.

THE OURO PRETO GOLD MINES.

The report of the company working the Ouro Preto gold mines of Brazil states that during the twelve months ending June 30, 1909, gold was produced to the value of £100,610.

Expenditures on behalf of the mines, including £3,414 paid to the Government as export duties on the product, aggregated £88,627.

EXPORTS OF TOBACCO.

Tobacco, which is one of the principal exports of Brazil, has, since 1902, suffered a considerable decline in the quantity exported, and,

with the exception of 1907, the value of the product exported also decreased. More tobacco is raised in the Republic than ever before, and the fall in the exports is due to the fact that from year to year a larger proportion of the crop is worked up and consumed in the country. Most of the Brazilian tobacco exported goes to Germany, Austria, and Italy, and a small quantity to the Argentine Republic and Uruguay. At present Bahia is the principal tobacco producing State of Brazil, the crop of that Commonwealth in 1908-9 having amounted to 500,000 bales of 7 kilos each, as compared with 200,000 bales in 1907-8 and 370,000 bales of the same weight in 1906-7. The following table shows the exports from 1902 to 1908, inclusive:

Year.	Tons.	Value in pounds sterling.
1902	45,200	1,206,342
1903	23,397	948,867
1904	23,964	838,516
1905	20,390	825,206
1906	23,629	931,853
1907	29,692	1,284,036
1908	14,866	841,290

NEW RAILWAY ENTERPRISE.

By a decree of October 28, 1909, the "South American Railway Construction Company (Limited)" has been authorized to operate in Brazil. The company has for its objects the construction and administration of railways and public works of all kinds. This is an English company, capitalized at £100,000.

PREMIUMS FOR THE EXPORTATION OF FRUIT.

A Presidential decree dated November 4, 1909, offers premiums to exporters of fruits at each port of Brazil maintaining direct communication with foreign ports. Four premiums will be awarded, to the value of 10,000, 5,000, 3,000, and 2,000 milreis. These will be given to exporters who shall ship the largest quantity of fruit within eight months from the date of the decree. Contestants for the prizes can not export less than 50 tons.

COASTWISE NAVIGATION SERVICE.

The time fixed for the presentation of bids for the navigation service between São Luiz, in the State of Maranhão, and ports to the north and south expired December 30, 1909. The conditions call for the establishment of three distinct services:

Southern line: One round trip monthly between São Luiz and Recife, calling at intermediate points.

Northern line: One round trip per month between Recife and Belem do Para, with calls at intermediate points.

Central lines: Two round trips per month between São Luiz and Barreirinhas and Tutoya; two round trips monthly between São Luiz and Miritiba, calling at São Jose and Icatu; two round trips monthly between São Luiz and São Bento, calling at Alcantara; one round trip monthly between São Luiz and Pinheiro; one round trip monthly between São Luiz and Turyassu, calling at Guimarães and Cururupu.

REGISTRATION OF PHARMACEUTICAL PRODUCTS.

For the registration of a foreign drug or pharmaceutical product in Brazil there are practically necessary: (1) A properly authorized agent of the manufacturer with power of attorney to perform all acts necessary for such registration, and (2) a formal statement or affidavit of the manufacturer, made before a proper authority in the country in which it is made, and duly authenticated by the nearest Brazilian consular officer, giving the exact chemical analysis and composition of the preparation, its method of manufacture, what it is expected to accomplish in medicine, and other facts properly indicating the nature of the preparation. The power of attorney also should be authenticated before a Brazilian consular officer.



CREATION OF A NITRATE COMMISSION.

Through the Department of Finance of the Chilean Government a Presidential decree was issued on November 20, 1909, whereby a commission charged with the interests of the nitrate industry is created. This board is formed in consequence of the report made on the subject by the preliminary committee of March 6, 1909, and in deference to petitions presented to the Government by the representatives of the industry.

The duties of the commission are: To make a thorough investigation of the methods of exploiting the nitrate deposits and of cheapening the production; to improve the present system of transport; to organize the sales of nitrate through a system of propaganda which shall demonstrate the value of the product in new markets.

RAILWAYS IN COURSE OF CONSTRUCTION.

On September 30, 1909, there were 1,350 kilometers of railways in construction in the Republic under the direction of the Chilean Government, 217 kilometers of which had a gauge of 1.68 meters, 909

kilometers a gauge of 1 meter, and 224 kilometers a gauge of 0.60 meter. The Longitudinal Railway represented 569 kilometers of the total under construction, the branches to the cordillera 585 kilometers, and those to the coast 196 kilometers. The approximate cost of the 1,350 kilometers, not including the Longitudinal nor the Saboya to Capitan railways, the budget for which has not yet been determined, amounts to, approximately, \$122,000,000 Chilean currency (\$25,620,000).

A British syndicate has received a contract from the Chilean Government for the construction of a railway to parallel the coast for a distance of 445.78 miles, running from Pueblo Hundido, about 450 miles north of Valparaiso, and ending at Lagunas, about 60 miles southeast of Iquique. The road is to be completed within four years at a cost of \$14,870,807 United States gold.

INDUSTRIAL NOTES.

A large soap factory at Valparaiso has a monthly output valued at from \$7,000 to \$12,000. Another company, whose head office is at Santiago, with branches at Concepcion, Coronel, and Lantaro, averages an output valued at \$14,000 per month. A high protective tariff renders foreign competition very difficult for ordinary soaps, but the general trade, covering face powders, perfumery, and finer grades of soap, is worth about \$700,000 to the countries interested. France, Germany, Great Britain, and the United States are the chief factors.

Matches are manufactured in the Republic, the principal center of production being Talca. Other factories have been established at Chillan and at Providencia, in the Province of Santiago. Imports of matches during 1908 were valued at \$87,452.

Stearin and other grades of candles are manufactured locally, the importations declining, in 1908, to \$267,772, against \$703,172 in the preceding year. Factories at Viña del Mar and at Santiago are gradually getting control of the trade.



REDUCTION OF SURTAX ON IMPORTS.

From July 1, 1909, the surtax of 70 per cent of the customs duties levied on Colombian imports through Cucuta, according to Executive decree, was reduced at a monthly rate of one-tenth, until 35 per cent of the duties was reached.

NEXT SESSION OF THE NATIONAL CONGRESS.

By a decree of November 27, 1909, President RAMON GONZALES VALENCIA has convoked the Colombian Congress in extraordinary session on June 15, 1910. The specified objects of the meeting are the election of a President of the Republic, the consideration of constitutional reforms, and the arrangement of financial measures for the fiscal period 1911.

An important item for governmental action is the sale of the contract for working the Muzo emerald mines, the agreement made with the English syndicate having failed of favorable action on the part of the Congress adjourned December 11. The contract will be sold to the highest bidder after three months' notice.

WORK ON THE AMAGA RAILWAY.

The line of railway to connect Medellin with the Cauca River at a point between the mouths of the Amaga and Poblanco rivers is reported by the Belgian consul at Bogota to be under active construction. The road is the property of a Colombian company capitalized at \$1,000,000. The railway will serve a very fertile region and will be especially advantageous to coffee growers.

During 1910 the company will place orders for 1,000 tons of rails of the Vignole pattern.



COFFEE SHIPMENTS, 1909.

Exports of coffee from Costa Rica in the twelve months ending with September 30, 1909, aggregated 12,030,104 kilograms (about 26,500,000 pounds). Figures published in the "Gaceta Oficial" for October 24 show that the bulk of these shipments or 9,782,299 kilograms (21,500,000 pounds) was sent to the British market.

FREE EXPORTATION OF WOOD.

The Government of Costa Rica has extended until December 31, 1911, the period for the free export of woods through the port of Puntarenas and other Pacific ports. Exception is made in the matter of cedar less than 40 centimeters in diameter, which will continue to pay the specified duty.

RAILWAY LAW.

On December 8, 1909, the President of Costa Rica promulgated the railway law, which provides that no railway for the transportation of passengers and freight shall be constructed in the Republic without the consent of the Congress, and that on the expiration of a railway concession, which in no case shall be granted for a longer term than ninety-nine years, the entire railway, including rolling stock, buildings, grounds, and appurtenances shall become *ipso facto* the property of the nation. All railway concessions are subject to the laws and regulations of Costa Rica now in force or which in future may be enacted, and no foreign contractor shall have the right to appeal to any laws other than those of Costa Rica in the settlement of any disputed questions that may arise in the construction, exploitation, or management of the railway.

No railway concession shall confer a monopoly upon any railway company, and the State reserves the right to parallel, cross, or intersect any railway for which a concession has been granted, or to penetrate the region traversed by the same, as it may deem expedient, by means of wagon roads, canals, railways, tramways, or any other means of communication. Nevertheless, the concession may prohibit the construction of a parallel railway within certain limits for a period of ten years. All railways and railway property are subject to the law of expropriation should the welfare of the State so require.

The sale, lease, or transfer in any manner whatsoever of a railway concession before becoming valid is subject to the approval of the Congress. In no case shall a railway concession, railway, telegraph or telephone line be sold, mortgaged, leased, or transferred in any manner to any foreign power, nor shall a foreign Government or State become a partner or owner of the stock, bonds, or obligations of any railway company. No government railway shall be leased to individuals or companies without the consent of Congress, nor shall the Government enter into any agreement for the rescission of a railway concession without first obtaining the authorization of Congress.

Companies or persons desiring to secure a railway concession must apply to the Secretary of Fomento, accompanying the application with a general plan or sketch of the line, showing the length of the road, the bridges, stations, culverts, etc., to be constructed, and the estimated cost of the road, all of which shall be subject, in case the concession is granted, to modification by the Government. All railways operating in the Republic, whether organized abroad or not, are considered Costa Rican companies, and are subject to the laws of the land.

The law provides for government inspection of railways, specifies the manner in which freight and passenger tariffs shall be issued,

and guards, in general, the interests both of the public and of the railway companies in a just and equitable manner.

In case of war the Government, should it consider advisable to do so, has the right to suspend traffic on any railway line when considered desirable for the defense of the State, but in such case the railway company shall be entitled to such indemnity as may be agreed upon or determined in accordance with the provisions of this law.

MERCANTILE LAW.

On November 25, 1909, the President of the Republic of Costa Rica promulgated an important law relating to the organization and operation of business concerns, companies, and corporations. Under this law partnerships, companies, and corporations are required to register in a "Mercantile Register" kept for that purpose, setting forth the principal facts connected with the business, such as the date of organization, the names and addresses of the parties in interest, the kind of business, the capital employed, and all important particulars connected with the business. The full text of the law, consisting of 154 articles, is published in "La Gaceta" of Costa Rica of December 3, 1909.

PUBLIC INSTRUCTION IN THE REPUBLIC.

United States Consul SAMUEL T. LEE, of San Jose, reports as follows concerning the public schools of Costa Rica:

All public schools in Costa Rica are controlled by a national minister, and the office which has direct charge of this work is known as El Despacho de Instrucción Pública, of which Señor Don R. BRENES MESÉN is the head, with the official title of Subsecretario de Estado en el Despacho de Instrucción Pública.

For the administration of primary public instruction Costa Rica is divided into five divisions, each division is divided into circuits, and each circuit is divided into districts. The district is the unit, and each district has its school board, which looks after financial matters. The technical direction of the public primary schools, however, is entirely under the Jefatúra Técnica, which is directly responsible to El Despacho de Instrucción Pública. The five divisions referred to fall under the direction of Jefatúra Técnica. Two of these divisions have five circuits, one has four circuits, two have three circuits, and one has one circuit. At the head of each circuit there is an inspector of public instruction, who is responsible for the work of the schools in the various districts of the circuit. The foregoing applies only to primary instruction.

The Colegios de Segunda Enseñanza (high schools) are directly and exclusively under the control of the Minister of Public Instruction. The names of these institutions follow: Liceo de Costa Rica (has normal training department); Colegio Superior de Señoritas (normal department); Liceo de Heredia; Instituto de Alajuela; and Colegio de Cartago. The first three are supported entirely by national funds, while the expenses of the last two are met equally by municipal and national funds.

The Liceo de Costa Rica, for boys, has a department given over to normal training, as has also the Colegio Superior de Señoritas. These two departments are really the national normal schools of Costa Rica, one for males and the other for females. There are 130 government scholarships divided between these two schools, and for these "pensionistas" the National Government buys all text-books at local bookstores on the orders of the directors of the institutions. Save in the cases of indigent children, the pupils throughout the Republic are required to furnish their own text-books.

There are 30,000 children in average attendance in the primary and 1,200 in the secondary schools.

MODIFICATION OF THE CIVIL CODE.

The Congress of Costa Rica passed a law on December 3, 1909, modifying article 430 of the Civil Code so as to permit the issuance of *cedulas* (warrants) of the denominations of 100 units (colones, dollars, etc., as the case may be) or multiples of 100, in national or foreign money. Each *cedula* must be signed by the General Register, the owner or representative of the real property mortgaged, and must contain sufficient data on its face to identify the property. The amount of the mortgage to which the *cedula* refers must also be shown, the name and address of the person in whose favor it is issued must be given, and the date and place of payment must be specified, as well as the number of coupons and the dates on which they fall due.

TRANSPORTATION LAW.

A general transportation law has been enacted by the Congress of Costa Rica, and was promulgated by the President of the Republic to become operative on December 4, 1909. The law regulates the transportation of passengers and freight on land and sea, specifies the conditions that shall appear on bills of lading, and sets forth the obligations and rights of shippers, transporters, and consignees. The new law treats fully of the transport of live animals and perishable material, and also of the carriage of passengers and baggage, and of everything relating to transportation in all forms.

HOMESTEAD LAW.

In conformity with the homestead law, which became effective November 19, 1909, every Costa Rican citizen who is the head of a family has the right to acquire 50 hectares of public land for settlement and cultivation. After entry is made a house must be built upon the land, part of which must be placed under cultivation, and residence maintained thereon. After the expiration of three or five years, as the case may be, according to the conditions of entry and the use to which the land is put, if all the requirements of the law have been complied with, title to the property in fee simple will be issued to the settler. A naturalized citizen must have resided with

his family at least one year in the Republic prior to entry upon public lands under the homestead law. By head of a family is meant any married man, or widower with children born in wedlock, or unmarried man who has to support one or more minor brothers or sisters who have lost their father.

FREE ENTRY OF SEEDS, VEGETABLES, AND PLANTS.

An executive decree of November 23, 1909, with a view to encouraging the development of agriculture in the Republic of Costa Rica, admits imports of seeds, vegetables, and plants free of customs, wharfage, and consular duties.



SUGAR PRODUCTION IN 1908-9.

The Statistical Bureau of the Treasury Department of Cuba, in its report on the sugar production of the Republic, states that the crop for the year 1908-9 amounted to 10,568,642 bags, or 1,520,226 tons, an increase of 551,051 tons, or 36½ per cent over the crop of the previous year. The production of 1907-8 was, however, smaller than it had been for several years preceding that time. The size and increase of the production, as compared with that of former years, and the changes occurring in the amounts of the crops can be seen from the following figures, which give the number of tons of sugar produced in each of the last 20 years:

Year.	Tons.	Year.	Tons.
1889-90	632,268	1899-1900	283,651
1890-91	816,980	1900-1	612,777
1891-92	976,000	1901-2	863,792
1892-93	815,894	1902-3	1,003,873
1893-94	1,054,214	1903-4	1,052,273
1894-95	1,004,264	1904-5	1,183,347
1895-96	225,221	1905-6	1,229,736
1896-97	212,051	1906-7	1,441,910
1897-98	305,543	1907-8	969,175
1898-99	335,668	1908-9	1,520,226

The production of the different Provinces for the past two seasons was as follows, amounts being given in tons:

Provinces.	1908-9.	1907-8.	Provinces.	1908-9.	1907-8.
	Tons.	Tons.		Tons.	Tons.
Pinar del Rio	31,570	22,333	Camaguey	98,024	52,919
Havana	183,197	113,501	Oriente	335,753	218,482
Matanzas	362,080	217,726	Total	1,520,226	969,175
Santa Clara	509,602	344,214			

During the last year there were 169 mills grinding—about the same number that were at work the previous year. The Santa Filomena, of Matanzas, which produced 20,400 bags in the 1907-8 season, was not at work last year. To make up, however, this loss there was the Constancia, which was not at work the year before, but produced 81,245 bags during the past year. The mills that had the greatest outputs were: The Chaparra, 482,428 bags; the Boston, 373,519 bags; the Preston, 286,716 bags; the Alva, 219,407 bags. The Quijano, of Marianao, produced the smallest number of bags, 590; and the Gerardo, of Cabañas, Pinar del Rio, also had a small output, 4,478 bags.

BRANCH OF THE BANK OF CANADA AT BAYAMO.

The progressive and historic town of Bayamo, situated in the Province of Oriente, is soon to have a branch of the Bank of Canada. A railroad is building through this rich and productive portion of the island, and railroad communication with the important port of Manzanillo is assured within a short time, and later with the flourishing city of Santiago de Cuba. Bayamo and vicinity is developing rapidly and is a promising field for the investment of capital in agricultural, industrial, and commercial enterprises.

BUDGET ESTIMATE FOR 1910-11.

On November 12, 1909, the Cuban budget for 1910-11 was transmitted to Congress by President GOMEZ. The receipts on account of the regular budget are estimated at \$29,805,698, and on account of the fixed budget with revenue derived mainly from internal taxes, \$4,973,982, a total of \$34,779,680, including the lottery, \$3,000,000, which previously had been estimated at \$2,000,000.

The national expenditures are estimated at, regular, \$24,645,549, and fixed, \$4,973,982, a total of \$29,618,531, this amount being \$4,294,917 below that of the last budget as presented to Congress, which, however, was reduced by presidential action after the adjournment of Congress by about \$2,000,000.

The present budget indicates an apparent surplus of \$5,159,149. This, however, does not take into account an installment of about \$2,225,000 on the SPEYER loan of \$16,500,000 for the Cienfuegos and Havana sewer and waterworks and some other items, which reduce the apparent actual surplus to about \$2,400,000.

PATENT AND TRADE-MARK REGULATIONS.

The United States Chargé d'Affaires at Havana, Mr. FRED MORRIS DEARING, reports as follows concerning the steps which must be taken to secure protection for trade-marks and patents in Cuba:

In Cuba there are no common-law trade-marks, as they are known in the United States. No one can acquire property in a trade-mark here without registration of the same with the Department of Agriculture, Commerce, and Labor.

If the owner of an American trade-mark wishes to secure protection under the laws of Cuba, this trade-mark must be filed with the office indicated. In order to file the trade-mark, a power of attorney, authenticated by some Cuban consular officer, must be sent to some one in Havana, together with an authenticated copy of the trade-mark issued by the United States Patent Office, which copy must be legalized by the Cuban legation in Washington. In addition to the power of attorney and authenticated copy of the trade-mark, it is advisable also to send at least 14 uncertified copies of the trade-mark; the ordinary printed copies used by the Patent Office are sufficient. A short application requesting deposit of the trade-mark is then written out in Spanish, signed by the attorney in fact, and filed with the above-named department, together with power of attorney, the authenticated copy of the trade-mark, and six of the uncertified copies with certified translations into Spanish. In the course of time the department issues a certificate accrediting the registration of the foreign trade-mark in the Cuban Patent Office. The government fee for filing is \$12.50. The foreign trade-mark then has all the protection and advantages which correspond to a Cuban trade-mark.

The filing of the trade-mark grants the exclusive right to the use of the same, and the law provides for both criminal and civil remedies against any person infringing the trade-mark.

CUBAN NATIONAL TRADE-MARK.

In the case of a house established in Cuba, if a Cuban national trade-mark or manufacturer's mark is desired, an application is presented either directly by the trading or manufacturing house or by special attorney in fact. There should be attached to the application a description of the mark and six copies of the design. It is also necessary to accompany with the application, or at least to exhibit on filing the application, the receipt for the last quarter's municipal industrial tax and the license to do business. In the course of time a certificate accrediting the registration of the trade-mark is issued, as in the case of the foreign trade-mark. The government fee is \$12.50.

In both the case of the foreign trade-mark and of the Cuban national trade or manufacturer's mark examination is made in the records of the Patent Office to ascertain whether or not the mark applied for is similar to any other mark already recorded; if so, the application is refused. There are certain prohibitions as to the designs which may be applied for. Neither the national arms of the Republic nor of any foreign country, without the express consent of the Government concerned, can be registered as a trade-mark. Common trade names, designs which may be offensive on moral or religious grounds or on the grounds of good taste, are not accepted.

The law on the subject of trade-marks is the royal decree of August 21, 1834, with certain subsequent provisions, referring generally to the procedure for registration.

PATENT LAWS OF THE ISLAND.

The patent law in force in Cuba is the royal cedula, June 30, 1833. This was the patent law applying to Cuba, Porto Rico, and the Philippines during Spain's supremacy.

There exists another general patent law for the Spanish dominions—the law of July 30, 1878; but it is held that this general patent law of the Spanish dominions ceased to be in effect in Cuba when Spanish sovereignty terminated. Nevertheless, it may be noted that the general Spanish patent law of 1878 has been considered by some authorities to still exist, as legislation supplementary or explanatory of the Cuban patent law of 1833.

Under this law patents on the following can be obtained: "Machine, apparatus, instrument, process or method, either mechanical or chemical, which may be new in whole or in part and not practiced in the same manner and form." It can not be definitely said whether or not industrial products are the subject of patent.

OBTAINING A PATENT IN CUBA.

The procedure for obtaining patents under the present law and rulings is as follows: The application is presented to the Department of Agriculture, Commerce, and Labor, accompanied by a sealed package containing, in duplicate, the designs, drawings, etc., and a detailed description of the patent solicited. This sealed package is opened by a committee of functionaries of the department, at which opening the applicant may be present. The application is then examined by the Economic Society of Friends of the Country, which reports upon the desirability of issuing a patent and as to whether the object for which it is sought comes within the provisions of the law. Upon favorable report by the society and by the proper bureaus in the department, a patent is granted for a term of seventeen years. A fee of \$35 must be paid on the granting of the patent to the applicant. A certificate is issued to the patentee, describing the patent, with the terms and specifications.

Theoretically, the Cuban patent is neither like the French patent, which is granted without examination and without guaranty by the Government as to its validity, nor like the American patent, which is granted after a searching examination to determine whether the object is properly patentable or constitutes an infringement on previously existent patents, but some examination is made as to the novelty and utility of the patent and as to its infringement of patents already granted or registered. The records of the Patent Office are secret; no one is at liberty to examine the specifications of patents already granted or filed, the intention being, apparently, to protect patentees from infringement.

In the case of an American patent, the procedure indicated for the filing of an American trade-mark is practically paralleled.

DOMINICAN REPUBLIC

BANKING LAW.

The new banking law of the Dominican Republic, promulgated on November 15, 1909, provides that banks of issue shall have a capital of not less than \$500,000; mortgage banks, \$100,000, and *Refaccionarios* banks, or those especially intended to facilitate agricultural and industrial operations by means of privileged loans, but without mortgage, \$50,000. Banks desiring to increase their capital must obtain the permission of the Department of the Treasury.

Banks are required to have a reserve fund, and to set aside annually 10 per cent of the net profits until the same amount to 30 per cent or more of the total capital. Banks of issue will not be chartered for a longer period than thirty years, nor mortgage and *Refaccionarios* banks for a term exceeding fifty years, but the Government may renew the charters three months before the expiration of the same.

No bank that is established in the Republic shall have its domicile abroad, or place its funds outside of the Republic. Companies organized in foreign countries for the purpose of establishing banks in the country are subject to the provisions of the banking law and to the laws of the nation, and the same is true of branches of foreign banks established in the Dominican Republic.

Banks of issue shall not place in circulation bills amounting to more than their total cash capital. Bank notes of the denominations of 1, 2, 5, 25, 50, and 100 dollars may be issued, the face value in all cases being redeemable by the banks in American gold. All bank notes shall be recorded in a book kept for that purpose by the Department of the Treasury. Bank notes are not a legal tender, and are only receivable when they are acceptable to the parties to whom they are tendered.

Banks are not permitted to charge on loans an interest exceeding $\frac{3}{4}$ of 1 per cent per month, or 9 per cent per annum. Bank capital is exempt from federal taxation, but is subject to an annual municipal and city tax of 1 mill per dollar on the total amount of the capital.



ECUADOR

MODIFICATION OF CHARGES FOR TRADE-MARK REGISTRATION.

In accordance with an Executive Order the excessive charges collected in Ecuador for the registration of trade-marks have been modified.

The provisions of the law require the weekly publication of the trade-mark in the "*Registro Oficial*" for three months, on which a charge of 10 sucre (about \$5) for each publication was collected. The attention of the Government having been called to the practically prohibitory character of the fee, it is announced by the "*Bulletin of the United States Trade-Mark Association*" for November, that the Secretary of the Treasury of Ecuador has made the following report indicating the satisfactory adjustment of the matter:

According to an Executive Order, No. 2064, issued on May 4 of the present year (1909), the above-mentioned fees were rectified and ordered that 10 sucre should be paid for each trade-mark whether published only once or several times.

INSURANCE LAW.

The insurance law of Ecuador prescribes that insurance companies doing business in the Republic must have an attorney or representative in the country authorized to discharge the obligation of the companies and capable of being sued. Before doing business in the Republic insurance companies are required to record their articles of incorporation in the Mercantile Register, and foreign companies must register powers of attorney granted their agents. The minimum capital for life or maritime insurance companies is 100,000 sucre (\$50,000), and for fire insurance companies 1,000,000 sucre (\$500,000), and 25 per cent of the declared capital must be invested in real estate in the Republic.

STATUE OF PEDRO MONCAYO.

The Congress of Ecuador has passed a law, which was promulgated by President ALFARO on November 10, 1909, and became effective January 1, 1910, providing for the erection of a bronze statue to perpetuate the memory of the Ecuadoran patriot PEDRO MONCAYO, a native of the Province of Imbabura. This statue is to be placed in the principal square of the city of Ibarra, and the funds for its erection will be obtained by a tax on the following products produced or consumed in the Province of Imbabura: A tax of 1 cent a box on the consumption of domestic cigars, of 2 cents for each 25 cigars made in the Province, and 50 cents a box on imports of foreign cigars; 1 mill per hundred on the value of the territorial property of Imbabura, exempting estates under 500 sucre (\$250); 5 per cent of the municipal taxes of Ibarra, Otavalo, and Coatacachi; 10,000 sucre (\$5,000) assigned in the budget, and gifts from private persons.

PROPOSED COAST LINE RAILWAY.

The Congress of Ecuador has authorized the municipality of Guayaquil to construct a railway to connect the city of Guayaquil with some of the coast towns. A certain proportion of the internal-revenue taxes of that municipality is to be used to pay the expenses of the survey and the cost of construction. The terminus of the railway has not yet been selected.

TAX ON THE MANUFACTURE AND SALE OF ALCOHOL.

According to the law of November 16, 1909, any person may distill alcohols and aguardientes in Ecuador and forward them to the places in which they are to be consumed, provided they comply with the provisions of the aguardiente law. Spirits made from grapes

grown in the country are exempt from the stipulations of the aguardiente law.

Distilleries must be registered in the districts where they are located, and failure to comply with this provision of the law renders them liable to a fine of 500 sures (\$250). Distilleries are divided into three classes, according to the apparatus used in distillation, and are subject to inspection by the proper officers of the Government.

After determining the daily production of a still, the Treasury Board levies a tax on the amount of aguardiente produced, at the rate of 15 cents per liter of 21° Carthier, payable semimonthly. In addition to the tax mentioned, the law prescribes that on and after January 1, 1910, aguardiente brought for consumption to any place in the Republic is subject immediately to a tax of 15 cents per liter of 21° Carthier.

PETROLEUM, GAS, AND ASPHALT CONCESSION.

The ad referendum contract made on July 15, 1909, with **CARLTON GRANVILLE DUNNE**, for the exploitation of petroleum, natural gas, and asphalt deposits found on government lands of Ecuador in whatever form these substances may be encountered, as approved by Congress, became operative November 5, 1909.

The concessionaire has the right to lay pipe lines from the sources of supply to the places where it is desired to store or consume the products, and the machinery, explosives, tools, etc., required for the exploitation of the deposits may be imported free of customs and municipal duties for a term of fifty years, and the free exportation of the crude or refined products for a like period of time. After the expiration of fifty years, 50 per cent of the value of the machinery, installations, warehouses, telegraph and railway lines, etc., of the company shall become the property of the nation without the payment of any consideration whatever.

The concessionaire agrees to organize a company in London, within six months from the approval of the ad referendum contract by Congress, with a capital of £1,000,000 and to pay the Government immediately £30,000 for granting the concession. The Government has the right to appoint two directors of the company, with residence in London, for the purpose of guarding the interests of the State. Two-thirds of the employees of the company must be Ecuadorans.

The company agrees to supply to the inhabitants of Ecuador petroleum, natural gas, and asphalt at prices not in excess of the prices charged for these same products when exported, and to sell said products to the Government and municipalities for their use at the cost of production.



GUATEMALA

REFUNDING OF THE NATIONAL DEBT.

Through the interested firm it has been announced that a contract involving the refunding of the national debt of the Republic of Guatemala and the placing of its finances upon a gold basis was entered into several months ago between the Republic and Messrs. GEORGE W. YOUNG & Co. Representatives and associates of Messrs. YOUNG & Co. have been in Guatemala for several weeks engaged in perfecting the details necessary to the carrying out of the contract.

The amount settled upon is \$12,000,000.

The external debt, consisting of the principal contracted in 1895, drawing nominally 4 per cent certificates of unpaid interest and uncertified back interest, aggregated \$10,089,000. The refunding of that debt and the placing of the currency on the gold standard will raise the amount of the YOUNG loan to a sum considerably above that negotiated by the Guatemalan Envoy, JOSÉ SANTOS CHOCANO, who represented the government in the transaction.

THE STUDY OF ENGLISH IN THE PUBLIC SCHOOLS.

The Government of Guatemala has adopted the system of instruction prepared by Prof. JOHN CROSS for teaching the English language by the use of the phonograph in the public schools. The CROSS system is taught at the International Correspondence School at Scranton, Pa. An edition of 5,000 copies of the Introductory Text will be printed by the Government, 2,000 of which are to be delivered to Mr. CROSS, the remainder to be the property of the Government. In addition to the introductory text-book, pupils in the high schools are required to use the phonographic reader.

INDUSTRIAL NOTES.

One of the leading industries in Guatemala is the manufacture of beers and liquors. The progress of these industries has reduced the trade in foreign beers and has created a large import trade in malt and other raw materials.

The textile industry is also making notable progress. Factories established at Cantel, in the Department of Quezaltenango, import large quantities of raw cotton from the United States and Mexico, a recent shipment from New Orleans covering 400 bales.

Candles and soap are being manufactured, one company having obtained authority from the Government to import annually 3,000 quintals of paraffin and 2,000 quintals of stearin free of duty.

In the capital, as well as elsewhere, ice factories exist, and the manufacture of furniture has become a valuable national industry owing to the abundance of fine cabinet wood. Small works produce foot-wear, straw hats, pottery, etc. Tentative efforts are being directed toward the employment of the twigs of a native plant for the manufacture of wicker furniture, and, for the treatment and preparation of henequen fiber at San Cristobal, the Government has granted free entry for the requisite apparatus.

The Government is lending all possible aid to the establishment and promotion of new industries and improved methods.

EXTENSION OF THE BOUNDARY CONVENTION WITH HONDURAS.

The boundary convention celebrated between Guatemala and Honduras on March 1, 1895, has been extended for a period of two years, or until March 1, 1912.

PARTICIPATION IN FOREIGN CONGRESSES.

The Government of Guatemala will be represented at the International Wireless and Electric Congress to be held in Brussels, Belgium, in September, 1910. H. M. VAN DER CRUYCEN, the Consul-General of Guatemala in Brussels, has been appointed by President ESTRADA C. as a delegate. Mr. VAN DER CRUYCEN has also been appointed a delegate to the International Congress of Horticulturists that will be held in the same city from April 30 to May 3, 1910.



COMMERCE OF THE REPUBLIC.

The "*Moniteur Officiel*" of Haiti publishes in its issue of September 25, 1909, the report submitted to Congress by Mr. EDMOND HÉRAUX, Secretary of Commerce, covering the commercial conditions of the country during the fiscal year 1907-8 (October 1, 1907, to September 30, 1908) and the first three months of the fiscal year 1908-9.

The import trade of the Republic for the latter period amounted to \$1,177,508.58, against \$1,577,317.17 in the same period of the preceding year, or a decrease of \$399,808.59 for the first three months of the year 1908-9. This commerce was distributed as follows among the countries of origin: United States, \$823,931.16; France, \$128,709.18; England, \$162,844.45; Germany, \$33,951.03; other countries, \$28,062.81.

The imports of specie from the United States during the period in question amounted to \$154,129.89, against \$281,000 in the same period of the preceding year, or an increase in favor of the latter period of \$126,870.11.

The export commerce for the first quarter of 1908-9 amounted to G. 3,200,000, against G. 4,483,415 in the same period of 1907-8, or a decrease of G. 1,283,415.65 for the period 1908-9.

The following table shows the principal articles and products, together with the quantity, shipper abroad:

	Pounds.
Coffee	11,689,825
Campeche (logs)	9,324,960
Campeche (roots)	1,400,000
Cacao	525,006
Cedar wood	52,000
Cotton seed	68,881
Sheepskins	51,639
Cotton	36,309
Orange peel	26,374
Mahogany	17,000
Oxhides	15,563
Wax	21,624
Corn	48,298
Pita	18,298
Cocoanuts	10,758
Honey	9,448
Copper	7,818
Horns	3,074
Starch	2,551
Pistachio nuts	2,222
Guaiac gum	1,636
Yellow wood	1,000
Tortoise shell	42

Imports for the fiscal year 1907-8 amounted to \$4,701,160.80, distributed among the countries of origin as follows: United States, \$3,316,827; France, \$552,460; England, \$466,836; Germany, \$134,074.58; other countries, \$230,962.80. Compared with the commerce of the preceding year, which reached \$4,451,730.57, an increase of \$249,430.23 is noted for 1907-8. In this import trade increases are noted in the following countries of origin: United States, \$233,634.79; England, \$46,922.66; other countries, \$42,508.08; while with France and Germany decreases of \$52,113.13 and \$11,522.17, respectively, are noted. The imports of specie from the United States amounted to \$806,986.50 in 1907-8 compared with \$351,465 in 1906-7, or an increase of \$455,521.50.

The total export commerce of the Republic for the fiscal year in question is represented by \$3,479,848.15 compared with \$2,866,177.55 in the preceding fiscal year, or an increase of \$613,670.60 in favor of 1907-8.

The following table gives the value of the products exported together with the increase over the preceding year:

Products.	1907-8.	Increase.
	Pounds.	Pounds.
Coffee	63,848,330	4,023,464
Cacao	5,889,504	1,049,767
Orange peel	540,727	131,925
Goat skins	291,166	1,796
Palms	138,235	735
Copper	45,520	10,483
Guaiac gum	13,085	1,892
Horn	11,557	845
Tanned hides	38,421	15,070
Cocoanuts	62,023	57,437

Among the articles which show great decreases in the quantities exported and which formerly contributed in great measure to swell the revenues of the Treasury are the following:

	Pounds.
Campeche (logs)	25,338,898
Campeche (roots)	23,062,440
Guaiac wood	3,798,352
Cotton seed	2,444,804
Cotton	1,111,755
Oxhides	133,548
Cedar	127,330
Yellow wood (roots)	143,000

In the closing paragraphs of his report the secretary refers to the Haitian Chamber of Commerce, established February 6, 1906, and declared to be of public utility by a presidential decree of November 30, 1907, which is more and more making itself felt and is destined to render great service to agriculture, industry, and navigation. It intends to establish a permanent exposition of the products of the soil and industry of the country in order that they may become better known. At the request of the department, the Chamber of Commerce drafted an important trade-mark law which is to be presented to Congress during the coming session. The secretary also refers to various commercial treaties and conventions concluded by the Government with foreign countries during the period covered by the report, and which have at different times been mentioned in the BULLETIN.

SURTAX ON IMPORT DUTIES.

The Haitian Government by the law of August 20, 1909, is authorized to contract a loan, in the best interests of the country, for 1,000,000 gourdes in nickel coins of 50 centimes, to be subsequently withdrawn from circulation, and of 1,500,000 gourdes in notes for the current service of the country.

The nickel coins of 50 centimes representing this loan shall be melted in the presence of the legislative commission to be formed for the withdrawal of the notes of 1 and 2 gourdes.

The notes which also make up said loan shall be handed to the Treasury for the public use, after deducting 166,666.66 gourdes in favor of the sufferers from the fires which took place on the 5th, 6th, and 10th of July.

A further surtax of 15 per cent on the aggregate import duties is to be applied to the repayment of said loan. This surtax was to be levied three days after the promulgation of the present law.

As soon as the loan has been paid off, the further surtax of 15 per cent shall be reduced to 10 per cent, and such 10 per cent surtax shall be applied to the withdrawal of the nickel coins now in circulation, to be always directed to 50-centime pieces, under the control of the legislative commission to be formed in virtue of the law dated August 11, 1903.

The present law repeals all laws or provisions of law inconsistent therewith and shall be enforced at the instance of the Secretary of State for Finance and Commerce.

HONDURAS

FINANCIAL CONDITIONS.

In connection with the consideration of the refunding of the public debt of Honduras, the United States consul at Tegucigalpa, Mr. SAMUEL McCCLINTOCK, makes an extended report on the finances of the country.

The dissolution of the Federal States of Central America, which took place in 1827 imposed the sum of £27,200 upon Honduras as the share of the loan contracted in behalf of the Federation. Since that time the various loans placed by the Government have aggregated £6,051,108, exclusive of accrued interest, composed of the following amounts:

Funded share of federal loan of 1867, interest 5 per cent.....	£61,000
Loan of 1867, interest 10 per cent.....	680,000
French loan of 1869, interest 6½ per cent.....	600,000
Loan of 1870, interest 10 per cent.....	2,446,400
Total.....	3,787,400
In hands of government contractors and agents.....	2,263,708
Total.....	6,051,108

The internal obligations were stated on August 1, 1908, to amount to 4,739,219.41 silver pesos.

The estimate of receipts for the year 1909-10 is given as 4,714,064.92 silver pesos, composed of the following items: Duties from imports, ₡1,800,000; from export duties, ₡142,500; liquor and tobacco taxes, ₡1,750,000; miscellaneous, ₡1,021,500.

For the decade 1898-1908, the total net income of the Republic was ₡29,633,146.09 $\frac{1}{4}$, or ₡2,963,314.80 $\frac{1}{2}$ annually. The excess of expenditures over receipts for the period was ₡2,427,357.14, or ₡242,735.71 per annum.

MINING IN THE REPUBLIC.

At the present time, according to the United States consul at Tegucigalpa, only two or three mining companies are in successful operation in Honduras. That of the New York and Honduras Rosario Company, operating in San Juancinto, in the Department of Tegucigalpa, is the only one doing work upon an extensive scale. It employs about 1,800 men, of whom 30 to 40 are foreigners, mostly Americans. During 1908 it mined and milled 29,516 tons of ore, which yielded 976,540 ounces of silver and 16,664 ounces of gold. The ore is shipped to New York for smelting and refining in the form of bars, concentrates, and cyanide precipitates.

The mineral exports of Honduras during the year 1907-8 were as follows: Ore, \$167,360; cyanide products, \$204,862; copper, \$165; gold, \$18,360; coined silver, \$98,280; silver in bars, \$85,902; gold and silver, \$4,000. Total, \$578,939.

The mining laws of Honduras are based on the famous "Ordenanzas de Minería" of Spain, and give the alien the same rights as the native. Under this law anyone can denounce up to 1,000 hectares (about 2,400 acres) for mining purposes and pay a yearly tax of 50 cents silver (20 cents gold) per hectare.

An examination of the records shows that some 700 mines in all have been denounced. While the country is undoubtedly richest in silver, denouncements have also been made of gold, lead, copper, kaolin, crystal, iron, opals, marble, saltpeter, aluminum, chalk, coal, antimony, zinc, nickel, and asphalt. Petroleum is also found, and an exclusive privilege to extract and export it has been granted.

The iron found in the republic is said to be highly magnetic, and the copper of the mines of Guanacostre, in the Department of Olancho, are reported to run as high as 80 per cent pure copper and 20 per cent pure silver. A recent discovery of copper in the Department of Yoro has been reported, in which the veins are said to be 10, 12, and 14 feet in width. An estimate has been made that the entire body will average 50 per cent pure copper.

Surface indications are met with everywhere that seem to show rich deposits of ore of many kinds both in placer and quartz formation.

PINE FORESTS IN THE REPUBLIC.

The report made to the Government of Honduras concerning the pine lands of the north coast, by the commission designated for the purpose, covers the following interesting details:

On the north coast of Honduras, in the Mosquitia territory, between the large navigable rivers—Segovia and Patuca—there lies a zone of level land covered with the best class of pine trees.

This zone is bounded on the north by the Caribbean Sea for a distance of 84 geographic miles, from the bar of the Segovia River to the mouth of the Patuca; extending on the east, up the Segovia River to the Aguaguas River, a distance of 125 miles in a straight line; on the west by the Patuca River, from its principal mouth to the Wankibila, 95 miles in a straight line, and on the south by public lands for a distance of $14\frac{1}{2}$ miles.

It comprises an area of $4,613\frac{3}{4}$ square miles, of which it is estimated $3,058\frac{1}{4}$ square miles are covered with pine trees; that is to say, 1,957,600 acres.

QUANTITY OF TIMBER.

It is estimated that an acre contains 50 trees of from 8 to 30 inches in diameter and from 20 to 60 feet high, and in the area it is calculated that there are 97,880,000 trees suitable for use.

The pine forests of the places called Tipi Auca, upstream from Segovia, Mocoron, Rus Rus, to Aguas Vila, are sound, well nourished, and, for a distance of 90 miles, all that could be desired.

MEANS OF TRANSPORTATION.

In the zone are five extensive navigable lagoons, Caratasca, Tasing, Ibentara, Guarunto, and Tilbalacan, communicating with each other by means of large, deep, natural canals. Within this area are also found the Nacunta, Ibentara, and Guarunto rivers and their tributaries, which empty into the lakes above mentioned. The large Patuca, Cruta, and Segovia rivers afford ample and easy means of communication for the transport of products. In places where fluvial highways can be utilized, traction machines can be used or railroads built at very little cost, since the lands have no grades of importance, nor will it be necessary to construct bridges or fill up depressions for a distance of more than 60 miles in the great Tipi Auca plain, where it will be only necessary to lay the ties and rails.

PORTS OF SHIPMENT.

The ports of shipment are Caratasca and Bruss Laguna. The Caratasca lagoon communicates with the sea by means of a short canal which is from $6\frac{1}{2}$ to 17 feet deep. The bar of the Bruss Lagoon is navigable during all the months of the year.

CLIMATE AND INHABITANTS.

The climate of the zone is, generally speaking, salubrious, and in the interior neither malaria nor mosquitoes are encountered.

The inhabitants are gentle and tractable, and willing to apply their energy to the hard work of felling timber.

The Government is disposed to make contracts for the exploitation of turpentine in its pine forests, as well as for the sale, in whole or in part, of the timber referred to. With this object in view the Minister of Fomento and Agriculture, at Tegucigalpa, will receive and consider all proposals tendered, and will likewise give such information as may be requested concerning the matter.

TARIFF MODIFICATIONS.

The free importation of certain goods into Honduras, as provided for by decree No. 45, which was to take effect August 1, 1909, has never been enforced, in accordance with the Executive Order in such matters. It is said that the Executive will recommend to the Congress, which convenes the 1st of January, 1910, a list somewhat similar to that contained in decree No. 45 for importation free of duty.

The following articles were exempted from duty by the decree referred to: Coal; gasoline; carbide of calcium; wire for fences; staples; machinery and tools for roads, agriculture, mining, or industries; live animals; seeds; forage; wheels for carts; harness; sacks for coffee; iron tires for wheels; motors of all kinds; windmills; printing presses; lightning rods; live plants; machines and material of iron for railroads and tramways; instruments for arts and industries; printed books; and lumber for building purposes imported through any port on the Atlantic coast.

By a decree dated August 17, 1909, the President of Honduras authorized the free importation of fencing wire and staples. The purpose of this decree is to promote the agricultural and cattle-raising interests of the country.

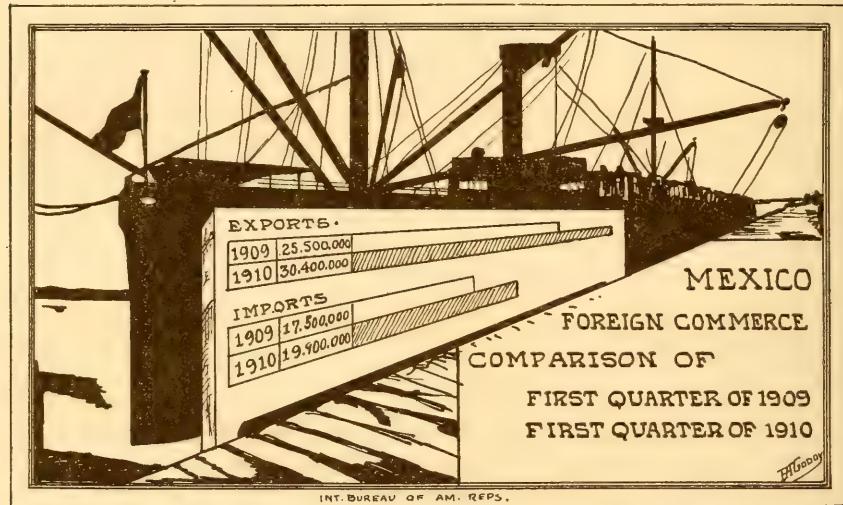


FOREIGN COMMERCE, FIRST QUARTER OF 1910.

Mexico's foreign trade, as reported by the Statistical Bureau of the Government, shows noteworthy gains for the first three months of the fiscal year 1909-10 as compared with the corresponding period of the preceding year.

Total imports are valued at ₡39,873,936 (\$19,900,000), a gain of ₡4,816,481 (\$2,400,000), and exports totaled ₡60,928,122 (\$30,400,000), a gain of ₡9,949,856 (\$4,900,000).

The share of the United States in this trade is represented by: Imports ₡22,743,923 (\$11,300,000), a gain of ₡4,243,591 (\$2,100,000), and exports ₡46,880,720 (\$23,400,000), a gain of ₡9,961,720 (\$4,980,000). It is thus shown that the trade revival is practically entirely due to increased commercial transactions with the United States, the gains reported for other countries being inconsiderable, some of them showing a decline in valuation.



COMPARATIVE STATEMENT OF THE EXPORTS AND IMPORTS OF MEXICO FOR THE FIRST QUARTER OF THE YEARS 1909 AND 1910.

The items received from abroad, reported in Mexican currency, are classified as follows:

	First three months—		Gain or loss.
	1909-10.	1908-9.	
Animal substances.....	₱2,944,271.75	₱3,115,597.54	-₱171,325.79
Vegetable substances.....	8,663,269.79	4,690,328.79	+8,972,941.00
Mineral substances.....	10,950,858.39	10,334,670.12	+616,188.27
Textiles and manufactures.....	4,414,379.45	3,981,703.21	+432,676.24
Chemical and pharmaceutical products.....	2,381,189.05	2,185,706.50	+245,482.55
Wines and liquors.....	1,454,742.49	1,188,998.34	+265,744.15
Paper and applications thereof.....	1,201,476.34	1,077,158.07	+124,318.27
Machinery and apparatus.....	4,401,508.02	5,449,274.12	-1,047,766.10
Vehicles.....	941,031.33	937,113.04	+3,918.29
Arms and ammunition.....	586,394.89	422,486.83	+163,908.06
Various.....	1,934,814.96	1,724,418.47	+210,396.49

Export classifications are as follows:

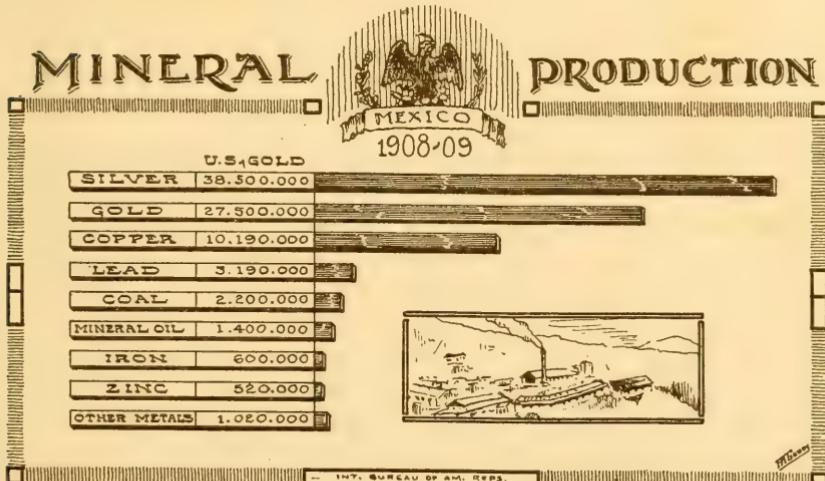
Mineral products.....	₱42,526,175.45	₱32,695,651.87	+₱9,830,523.58
Vegetable products.....	14,511,461.19	14,032,904.00	+478,557.19
Animal products.....	3,088,673.70	2,474,648.00	+564,025.70
Manufactured products.....	399,736.62	479,134.00	-79,397.38
Various.....	452,076.00	1,295,929.00	-843,853.00

MINERAL PRODUCTION, 1908-9.

In the budget estimate presented before the Mexican Congress by the Department of Finance, the mineral output of Mexico for 1908-9 is valued at P160,400,158, distributed as follows:

	Pesos.	U. S. gold.
Gold	45,015,000	27,500,000
Silver	77,110,000	38,500,000
Copper	20,383,000	10,190,000
Lead	6,397,000	3,190,000
Zinc	1,043,000	520,000
Iron	1,200,000	600,000
Other metals	2,052,158	1,020,000
Coal	4,400,000	2,200,000
Mineral oil	2,800,000	1,400,000

In the preceding year the mineral output was recorded as worth \$83,071,500, silver figuring for \$42,723,500, gold for \$19,048,000, and copper for \$12,400,000. The other minerals show slighter variations in the value of the year's product.



STATEMENT SHOWING THE MINERAL PRODUCTION OF MEXICO FOR THE FISCAL YEAR 1908-9.

FINANCIAL STATUS OF THE REPUBLIC.

According to the financial statement presented to the Mexican Congress by the Finance Minister of the Republic, Señor LIMANTOUR, on December 14, 1909, a surplus of P5,808,117.45 is shown in the revenues of the country at the close of the fiscal year 1908-9. Ordinary receipts for the period are given as P98,775,510.79 and expenditures as P92,967,393.34.

For the fiscal year 1910-11 estimated revenues and expenditures are placed at P100,793,000 and P100,306,267.76, respectively.

COINAGE UNDER THE NEW MONETARY RÉGIME.

The report of the Exchange and Currency Commission, as presented to the Minister of Finance of Mexico in September, 1908, shows a total of P127,955,770.20 coined in the currency of the Republic from May 1, 1905, to June 30, 1909. In this total, gold represents P83,386,500; silver, P42,728,543.30; nickel, P904,308; and bronze, P936,418.90.

In 1904-5 silver and bronze were coined to the amount of P353,300; no gold. In 1905-6 a total of P47,272,600 was coined, gold predominating in the amount of P41,776,500; in 1906-7 the total coinage was P47,935,670.70, gold figuring for P23,250,000 and silver for P23,367,923.80; in 1907-8 gold was coined to the value of P16,600,000 and silver P7,403,619.50, making a total of P24,003,619.50; and in 1908-9, in a total of P8,390,580, gold was represented by P1,760,000, silver by P6,528,000, and nickel by P102,580.

The mint of the city of Mexico coined P53,386,500 in gold and P32,321,000 in silver, the remainder of the gold being coined at the Philadelphia mint. The mints of San Francisco, New Orleans, and Denver coined part of the silver, and the bulk of the nickel and bronze coins were made at Birmingham, England.

TAX ON TEXTILE ESTABLISHMENTS.

The impost to be collected from the 118 textile factories operating in the Republic for the half year January-June, 1910, has been fixed by the Mexican Government at P1,118,200 (\$559,000). During the preceding six months 121 cotton mills were in operation on which a federal tax of P1,081,800 (\$540,400) was collected.

For the fiscal year ending June 30, 1909, textile fibers to be employed in the factories of the country show a gain of more than \$1,000,000 over the preceding year, whereas imports of textiles and manufactures thereof declined by over \$7,000,000, demonstrating the increased economic importance of the local establishments.

EXPORTS OF RUBBER, 1909.

The total exports of rubber from the Republic of Mexico during the fiscal year ending June 30, 1909, amounted to 18,781,399 pounds, 9,699,257 pounds of which were derived from the Castilloa and 9,082,142 pounds from the guayule plant. The official valuation of these rubbers was, for statistical purposes, £1,326,049, or about half the actual market value in New York during the period mentioned. Nearly all of the product was exported to the United States, small quantities going to France, Belgium, and Germany. About 1,200,000 pounds of the Castilloa rubber came from the planted trees. In June, 1909, it was estimated that the area of rubber under cultiva-

tion in Mexico was 126,437 acres, and that owing to the high price of the product a large additional area would be planted during the succeeding months of that year and in 1910.

APPLICATION OF THE NEW MINING LAW.

The rules and regulations of the new mining law of Mexico, approved by President DIAZ on December 16, 1909, are printed in full in the "*Diario Oficial*" of December 18 of the same year, and are classified under the following heads: (1) Concerning mining claims; (2) concerning denunciations of mining claims; (3) concerning oppositions; and (4) general provisions concerning applications for mining claims, easements, transportation and exploration, and expropriation and permits to foreigners. Another law of the same date treats of the fees to be paid mining agents.

When it is desired to prospect on government lands, a fee of 4 pesos must accompany the application to the mining agent. If the prospecting is to be done on private lands, and the owner of same gives his consent thereto, a fee of 4 pesos must be paid at the time of filing the application, but should the consent of the owner of the land not be obtained, a charge of 8 pesos will be made.

The total fees to be paid to the mining agent for all the proceedings in a denunciation, including a copy of the docket, until the delivery of the respective title, provided no reduction of claims or opposition arises during the proceedings, are as follows: Two pesos at the time of filing the denunciation; 10 pesos on the acceptance of the denunciation by the mining agent, and 18 pesos on receiving the copy of the extract of the application for publication.

For the proceedings caused by an application for the reduction of a denunciation of mining claims that is in course of procedure, 8 pesos at the time of presenting the application.

For the complete proceedings of an application for the rectification of a mining property in any of the cases prescribed in articles 53, 54, and 55 of the mining law, provided no opposition proceedings arise up to the time the new title or copy of the proceedings that are to be attached to the title are delivered, the following fees must be paid to the mining agent: Ten pesos at the time of filing the application and 18 pesos on receiving a copy of the extract of the application for publication.

For taking the steps necessary to expedite an application for the division of a mining property up to the time of the delivery of the titles for the new properties, a payment of 5 pesos must be made to the mining agent on filing the petition.

For all proceedings relating to the reduction of the claims (pertenencias) of a mining property, 10 pesos on filing the application.

For all proceedings concerning applications for the expropriation of lands or easements, if the mining agent intervenes in the same, a payment must be made in each case on filing the respective petition.

In case of opposition to a denouncement, the denouncer shall pay for the proceedings at the mining agency, 10 pesos, but retains the right to reclaim the same from the defendant or opposer in the corresponding suit.

For a copy of writs of execution or judgments, issued in suits opposing denouncements of mining properties, which copy should be included in the docket the mining agent sends to the Department of Fomento, a charge of 2 pesos per sheet, or fraction thereof, will be made.

For checking and authorization of plans, 2 pesos.

For a certified copy of the report of experts, or for any kind of document issued by the mining agents at the request of the parties in interest, a charge of 2 pesos per sheet, or fraction thereof, will be made.

For the registration of any document, 1 peso.

For locking up dockets, or any other documents contained in the files, 1 peso.

If the party in interest does not furnish sufficient data and it is necessary to register documents corresponding to more than one year a charge for registration of 1 peso per year will be made.

TRANSPORT NOTES.

The Pacific Navigation Company, of Guaymas, Mexico, has announced the establishment of a new steamship line between Mazatlan, Mexico, and San Diego, California, the schedule of which calls for a twenty-day service.

In addition to the through schedule, it is stated that stops of one day will be made at San Juan del Cabo, Magdalena Bay, Santo Domingo, San Quintin, and Enseñada, all of Lower California, on both the north and south bound voyages. The company will engage in a general coastwise business, in addition to handling through freight from Salina Cruz and other lower Mexican ports, the cargoes being transferred at Mazatlan. It is also stated that the company contemplates putting on a small steamer to ply between San Diego and Enseñada, making at least two round trips per week.

The Southern Pacific Railway Company has opened for freight and passenger traffic a portion of its Mexican line south of Mazatlan. The portion now in operation extends about 60 miles from Mazatlan to the village of Escuinapa, there being one train in each direction daily.

The company that is to build a railroad between Monclova and Chihuahua, a distance of 450 miles, the Coahuila, Chihuahua and

Northwestern, has formally organized, and its shareholders include a number of the wealthiest men in Mexico.

The proposed railroad is one of the most important railway projects yet made for northern Mexico, as the line is to run parallel with the United States boundary for its whole length and to connect with the International Line of the government merger system at Monclova, and with the Mexican Central, the Kansas City, Mexico and Orient, and the Mexican Northwestern at Chihuahua.

The States of Coahuila and Chihuahua have granted liberal subsidies for the construction of the line.

WEST COAST STEAMER SERVICE.

Reporting on the enlargement of steamship facilities along the west coast of America, United States Consul-General WEST, at Vancouver, British Columbia, states that the Jebsen Line (Jebsen & Ostrander, general agents), now operating two steamships of 3,500 tons burden between Vancouver, Sound ports, San Francisco, and Mexico to Salina Cruz, connecting with the Tehuantepec National Railway at Salina Cruz, across the Isthmus to Puerto Mexico, on the Gulf, are negotiating for the purchase or long-term charter of two steamers of larger capacity, to run in connection with those now in use, giving a fortnightly service between Vancouver, Puget Sound, and Salina Cruz.

Other vessels owned will probably be put on these routes as competitors in the early spring for the coastwise and Alaskan trade. These contemplated additions to the coastwise and Mexican line fleets indicate that trade conditions are steadily improving, and that the port of Vancouver is rapidly assuming a prominent place as a distributing point for goods, etc., from eastern ports of the United States and Canada, as well as from Europe, via the Tehuantepec route.

This fact is strongly illustrated by the recent discharge at this port of a large amount of canned fruits and vegetables from the Provinces of Ontario, Quebec, and Nova Scotia, which was shipped by the Elder Dempster Line from these Provinces to Puerto Mexico, thence by rail across Mexico to Salina Cruz, then by steamer to Vancouver for distribution, the rate being less than by all-rail route, goods arriving in good condition, and taking but slightly more time than by rail.

INTERNATIONAL CONGRESS OF AMERICANISTS.

In conformity with the decision of the XVI International Congress of Americanists, held in Vienna in September, 1908, the second session of the XVII International Congress of Americanists will be held in the Mexican capital from September 8 to 14, 1910, under the patronage of President DIAZ, the first session being adjourned from Buenos Aires.

The committee on organization, in its circular of invitation, stated that the members of the Congress will be granted a considerable reduction in the prices of maritime and railway transportation and hotel rates. The members of the Congress will be invited as guests of honor on the archaeological excursions contained in the programme, and will have the privilege of attending the other scientific, literary, and artistic gatherings, as well as all public celebrations in commemoration of the First Centenary of the Independence of Mexico.

GENERAL PROGRAMME.

In conformity with the by-laws approved at the session of Paris, held in 1900, the International Congress of Americanists has for its object the historic and scientific study of both Americas and of their inhabitants.

(a) The indigenous American races, their origin, geographic distribution, history, physical characteristics, languages, civilization, mythology, religion, uses, and customs.

(b) The indigenous monuments and archaeology of the Americas.

(c) The history of the discovery and of the European occupation of the New World.

The membership fee for individuals is \$10, Mexican silver, equal to £1, or 21 marks, or 28 pesetas.

Individual members have the right to vote in the proceedings of the Congress, to take part in its deliberations, and to receive the publications of the Congress free of charge. They are also permitted to register members of their families as associate members of the Congress, paying for each person \$8, Mexican silver, equal to 20 francs, 16 shillings, 17 marks, or 22 pesetas. The associate members may attend the meetings, excursions, and entertainments of the Congress, but have no voice in its deliberations, nor are they entitled to receive its publications free of charge.

Membership fees are payable by means of money orders or checks on Mexico, sent direct to the Treasurer of the Congress, Licentiate JOAQUIN D. CASASÚS, Banco Central, Mexico, D. F.

Membership tickets for individual or associate members will be forwarded immediately on receipt of the membership fee.

According to the usage established by the former Congresses, the languages recognized are: Spanish, French, English, German, Italian, and Portuguese.

The works presented to the Congress by individual members may be either oral or written, but shall not consume more than twenty minutes, unless some important subject is treated and the Congress grants a longer time. No speaker shall have the floor in the discussions for more than five minutes. All the works of individual mem-

bers shall be published, after approval by the committee on publication, in the report of the Congress.

The individual members of the Congress are urged to remit to the general secretary, as soon as possible, the titles of their essays, stating whether or not they desire to illustrate them.

Before July 1, 1910, each author shall send a summary of his work, so that it may be printed in the Journal of the Congress; no summary to contain over 1,000 words.

Motions to be presented to the Congress shall be in writing, shall be relevant and proper, and shall be forwarded before the 1st of July, 1910.

The sessions shall be held in the Conference Hall of the National Museum, where the individual members shall have at their disposal an apparatus for projecting illustrations on the screen.

On September 7, 1910, the Secretary of the Department of Public Instruction and Fine Arts will give a reception in honor of the individual and associate members of the Congress, followed on the next day by one by the government of the Federal District, and on the succeeding day by one given by the Council of the City of Mexico.

On the 10th of the same month an excursion will be made to the Teotihuacan Pyramids, where a lecture will be given by Mr. LEOPOLD BATRES, Inspector General and Curator of the Archaeological Monuments. The Department of Public Instruction and Fine Arts will give a banquet to the individual and associate members of the Congress at the same place.

After closing the Congress individual and associate members may visit Mitla, the Valley of Mexico, the ruins of Xochicalco, of Tzintzuntzan, and of Casas Grandes, the expenses of the trips being borne by the Department of Public Instruction and Fine Arts.

The individual and associate members who desire to visit other places of archaeological interest, shall be entitled to a reduction in the prices of the transportation companies.

Other data relating to the Congress will be furnished subsequently in a detailed programme.

EXTENSION OF MARINE AND GAME CONCESSION.

The Mexican Government has extended for a period of three years from June 14, 1911, the concession for the exploitation of marine products and the hunting of birds in the zone comprised between the mouth of the Ameca River in the Territory of Tepic, and the port of Altata, State of Sinaloa. The concessionaire agrees to establish in the zone described, within a period of one year from December 3, 1909, at least one canning factory for the utilization of marine products, and for this purpose may occupy such public lands of the

nation as may be necessary. The factory must be erected in conformity with the present sanitary laws, and is subject to such sanitary regulations as now exist or which in future may be adopted.

PROPOSED WATER-RIGHT LAW.

The Department of Fomento has submitted to the consideration of Congress a proposed law defining the waters over which the Federal Government has jurisdiction and the conditions under which same are to be used. According to this law federal waters are the property of the public, to be used for the common good, and are inalienable and imprescriptible. The rights of riparian owners and the use of federal waters by such are fully covered, as are the rights of the public and of individuals to the use of waters under the jurisdiction of the Government for irrigation and industrial purposes.

COTTON INDUSTRY IN THE LAGUNA DISTRICT.

The Laguna district produces 90 per cent of all the cotton grown in Mexico. This year a low estimate places the crop at 90,000 bales, weighing a little over 500 pounds each. The present selling price is \$0.30 Mexican currency (15 cents gold) per pound, which will give to the planters a gross return of \$13,500,000 Mexican currency (\$6,750,000 gold), outside of what they will realize on seed.

Cotton raising, with the industries directly pertaining thereto, may be considered the cause of the growth of the thriving cities of Lerdo, Gomez-Palacio, and Torreon, the smaller adjacent towns and villages, as well as the reason for the junction at this point of the two great railway systems of the Republic.

The seed used for planting is 90 per cent selected home product, the remaining 10 per cent being imported from the United States. The staple of the cotton runs from 1 to $1\frac{1}{2}$ inches in length. The bales are somewhat larger than the regulation size used in the United States, requiring presses built expressly for this district, and each bale is not only securely bound with iron bands, but covered as well with a matting of ixtle.

All of the Laguna cotton finds a ready market in the Republic, the seed being utilized in the district.

The Laguna district is wholly dependent upon irrigation to make the business a permanent industry. With the contemplated irrigation works on the Nazas River completed, the acreage in cotton will be increased many times, and so Mexico will become, unless the country greatly increases the number of spindles, an exporter of cotton.

In the district are five cotton mills with some 50,000 spindles, producing only the cheapest grades of cloth, and striving all the while to

cheapen the production for a market which will allow the poor laborer of the country to buy.

Laborers in these mills earn about \$1 Mexican currency (50 cents gold) for a day's work of eleven hours. The mills are financed and managed by Mexicans, while a number of the plantations are owned by foreigners. The looms and other machinery of the mills used in making cloth are made in England.

COAL MINING IN COAHUILA.

A concession has been granted for the exportation and exploitation of coal on public lands in the district of Monclova, State of Coahuila, and in the Salado River Valley. The concession is for a period of ten years, during which time the concessionaires agree to expend in exploration and development work at least \$100,000 Mexican silver. For the right of exploitation the concessionaires obligate themselves to pay to the Mexican Government in Mexican silver \$500 for the first year, \$1,000 for the second year, \$2,000 for the third year, \$4,000 for the fourth year, the amount to be increased successively \$1,000 a year thereafter until the expiration of the term of the concession. The Government retains the right to inspect the works, books, and establishments of the concessionaires whenever it may deem proper. With the consent of the Department of Fomento, the concession is transferable to third parties.

EXTENSIVE IMPROVEMENTS OF THE NATIONAL RAILWAYS.

On January 1, 1910, \$5,000,000 became available for the betterment and improvement of the lines of the National Railways of Mexico. It is learned from officials of the merger company that this large sum will be expended for ballast, heavier rails, sidings, new stations, and the general betterment and upbuilding of the system, including the purchase of rolling stock. The money was obtained by the issue of 4 and $4\frac{1}{2}$ per cent interest-bearing bonds.

PROPOSED ESTABLISHMENT OF A DEPARTMENT OF AGRICULTURE.

The Department of Fomento has presented a bill to Congress proposing the establishment of a special Department of Agriculture. The administration believes that a salutary influence will be exerted and that agriculture will be stimulated and encouraged by means of a thoroughly equipped department devoted especially to look after the varied and increasing interests of this rapidly developing branch of the nation's wealth. The proposed law provides means for the dissemination of knowledge and instruction on the great topics of agriculture, stock raising, and kindred industries. The holding of agricultural and stock expositions will be encouraged,

statistics will be collected, classified, and published, and means will be provided for the obtainment of funds for use in agriculture on favorable and equitable terms. The conservation of agricultural lands long in use and the exploitation and replanting of forests all come within the purview of the proposed department.

PROPAGANDA FOR HENEQUEN.

The Board of Agriculture of Yucatan has solicited the aid of the Federal Government in the establishment of better maritime transportation between Progreso, Yucatan, and Argentine and Uruguayan ports, with the view of increasing the sale of henequen in those countries. The matter has been referred to the Department of Communications and Public Works by the Executive Power, with the assurance that if the traffic in henequen can be increased sufficiently to justify the granting of a subvention the Government will favor doing so at the proper time. The Board of Trade at Merida, Yucatan, has notified the diplomatic representative of the Argentine Republic in Mexico of the attitude of the Mexican Government concerning the subventioning of a line of steamers to ply between Mexican Gulf ports and South America.

COLONIZATION IN SONORA.

United States Consul LOUIS HOSTETTER, of Hermosillo, furnishes the following information concerning capital and colonization in the Mexican State of Sonora:

Within the last two years large tracts of land in this State have been bought by United States capitalists, and in consequence of these purchases several American colonies are to be established.

One company, which has 600,000 acres in the Yaqui River Valley, has already disposed of 100,000 acres, mostly to American farmers from California. A number of these are already established and have started a settlement called Ontegota. They have erected dwellings and have planted a large portion of their lands, mostly in fruits and vegetables, which will mature some time before they do in California, so they expect to market them there as well as in the East. This company has made extensive improvements, having built a main ditch 65 feet wide and 28 miles long, to be extended 50 miles. Besides the main ditch it will build 200 miles of laterals. The company has already erected an experiment station, which is in charge of an experienced man and is well equipped.

Another company, composed of New York capitalists, has purchased a tract of 100,000 acres, situated 20 miles south of Hermosillo, through which the railroad passes. This is very good agricultural land, and is to be divided into small-sized farms and colonized. The company has found, upon experimenting, that water can be obtained in most parts of the land by digging wells from 20 to 60 feet deep, and as an artesian well has been opened at a station called Pesquiera, 60 miles north of Hermosillo, it is going to try and secure an artesian flow also.

Another company, of Los Angeles people, has bought a tract of 110,000 acres 40 miles west of Hermosillo, near the Gulf of California. This company has

been bringing in excursionists, and has sold over 10,000 acres; it has laid out the tract in different sized farms and has platted a town site on the coast.

Still another company, composed of Kansas City people, has bought 1,000,000 acres in the district of Altar. The most of this land is only fit for grazing purposes, but a good portion has been laid out in farms. A town site has also been laid out on the coast of the Gulf of California at a place called Point Lobos. The company claims to have sold quite a lot of land and to have made arrangements for the erection of some buildings on their town site.

IRRIGATION CONCESSION IN SONORA.

A concession has been granted by the Mexican Government, to a citizen of Hermosillo, to dam the Sonora River at a point 10 miles above the city. Government engineers, who were sent to examine the situation, claim there is enough water being wasted to irrigate a stretch of land 60 miles long by 20 miles wide. The company has to build a dam, reservoir, and ditches of sufficient capacity to carry all the water necessary, and it has the privilege of buying all government land along the line of the ditches, now free, for 25 American cents per hectare (2.47 acres). The company proposes to erect an electric plant, and claims it will have enough power for lighting the city, running the street cars, and supplying factories. This enterprise is to be capitalized by a New York company.



COFFEE CROP, 1909.

The United States vice-consul at Managua forwards the information that the coffee crop of Nicaragua for the season of 1909 will probably yield a total of 4,000,000 pounds. The Department of Matagalpa is credited with 1,500,000 pounds and that of Jinotega with 2,500,000 pounds. The original estimate had been in excess of 16,000,000 pounds and the outlook was the most promising reported during ten years, 14,000,000 representing the yield for 1908.

The bulk of the output, or about three-fourths, is sent to Europe, where it commands a higher price than in the United States.

FREE ENTRY FOR FOODSTUFFS.

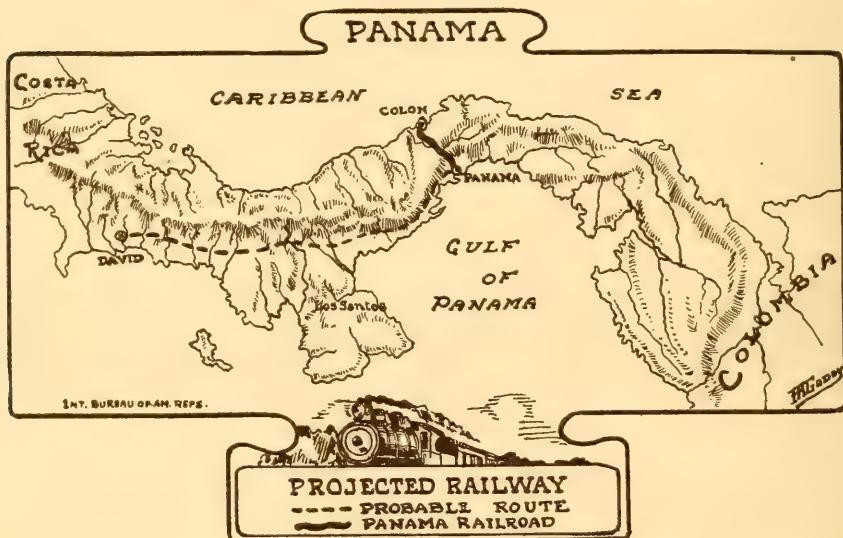
An executive decree of October 18, 1909, provides for the free entry at Nicaraguan ports of foodstuffs, including rice, flour, and beans. Flour is received regularly from California, rice from China, via San Francisco, and but small quantities of beans figure generally on the import list. Preferential treatment at certain points is given to onions.

PANAMA

RAILWAY PROJECTED BETWEEN PANAMA AND DAVID.

The Government of Panama has presented a proposal to the Canal Zone Government for the construction of a railway line between Panama and David whereby the Panama Railroad Company shall enter into a contract with the Republic of Panama for the construction of the line.

Through the Minister of Foreign Relations the project is discussed in the following terms:



MAP SHOWING THE ROUTE OF THE RAILWAY WHICH THE PANAMA GOVERNMENT PROPOSES TO BUILD BETWEEN DAVID AND THE CITY OF PANAMA, WHICH WILL HAVE TO CROSS THE CANAL A FEW MILES BEFORE IT REACHES THE LAST-NAMED POINT.

The Government desires to contract with the Panama Railroad: First, the study, survey, and definite location of the national line; it wishes afterwards to contract with the same company for the construction of the railroad from Panama to David, a distance of 274.4 miles. In this railroad is included a branch extending into the Province of Los Santos, also other branch lines that may be necessary for the complete development of the Republic.

A statement of the financial resources of the Government shows that the necessary funds will be available for the enterprise, which, it is anticipated, will be open to the public within ten years at the furthest.

In 1893 the Pan-American Railroad Commission estimated that the building of a standard-gauge railroad between the points mentioned would cost \$4,657,280. The budgets of the Republic for 1909 and 1910 fix the amounts to be expended for public works at \$900,000. The Congress, which meets in September of the present year, has power to order that the entire fund set aside in the budget for expenditures on public works in 1911 and 1912 be used for the construction of this railroad. Should this be done—and the department maintains that no more important work could be undertaken in the country—funds for the construction of 70 or 80 miles of the line within the next two years would be provided for.

SANITARY IMPROVEMENTS IN PANAMA AND COLON.

The Congress of Panama has appropriated \$800,000 for sanitary improvements in the cities of Panama and Colon, the greater part of which will be expended in Colon, at which place extensive improvements are planned, covering an area of 20 city blocks and a considerable portion of the outlying district. The Panama Railway also proposes to fill in and improve in Colon a territory of considerable extent. The sewer system is to be extended, and a number of alleys are to be paved with concrete blocks, the sum to be expended in improvements aggregating \$1,061,271.19, of which \$530,719.34 will be borne by the Government, \$306,581.75 by the Panama Railway Company, and \$223,970.10 by the property owners. The filling in will be done hydraulically by pumping coral sand from the bottom of the bay and carrying it in pipes to the sections to be filled up. An 18-inch suction dredge will be used for this purpose.

PATENT REGULATIONS.

Patents in Panama are granted for a period of from five to twenty years, a fee of \$5 being charged for each year of the concession. The applicant may request a patent for any number of years he desires between five and twenty. Besides this fee of \$5 he must also pay the expense of publishing his application in the "*Gaceta Oficial*," but this would not amount to more than \$1. If the person desiring the patent can not apply for same in person, he must give a power of attorney to some person in this city (Panama) to carry on the negotiations.

The method of obtaining a patent, as reported by United States Vice-Consul-General GUYANT, at Panama, is as follows:

The applicant or the person holding his power of attorney must prepare a memorial or written application, stating his desires, addressing the same to the Secretary of Fomento (Public Works). This memorial must be on legal government stamped paper of the value of 20 cents per sheet, and must be accompanied

by (1) a detailed explanation of the invention; (2) drawings, plans, or sketches of same; (3) a receipt from the Treasurer-General of the Republic showing that there has been paid into the Treasury by the applicant a sum equal to \$5 for every year of the desired life of the patent; (4) a power of attorney, when applicant is represented by a third person; and (5), when possible, a working model of the invention.

Upon receipt of such application and accompanying documents, all of which must be in the Spanish language, the Minister of Public Works causes the same to be published in the "*Gaceta Oficial*" two consecutive times. If, at the expiration of ninety days from the date of the first publication, there has been presented no claim, protest, or objection, a resolution granting the patent desired is issued.

NEW CENSUS OF THE REPUBLIC.

By a presidential decree of November 22, 1909, the preliminary formalities in regard to the taking of a census of the Republic of Panama are outlined.

PARAGUAY

FINANCIAL CONDITIONS.

The revenues of the Republic of Paraguay during the three years 1906, 1907, and 1908 amounted to \$3,080,400, \$3,392,640, and \$2,237,337, respectively.

Expenditures during the period cited were: \$2,734,261, \$2,987,865, and \$2,664,404. These figures cover only the budget statement and do not include fresh issues of paper money or the loan of \$1,000,000 obtained from the French Bank of the River Plate.

PERU

THE PERUVIAN CORPORATION IN 1908-9.

The net profit of The Peruvian Corporation in 1908-9 was £230,939, as compared with £263,203 in 1907-8. The decrease in the dividend is due to the fact that the directors have written off £119,836 from the discount and expenses of the issue of £1,700,000 debentures, thereby leaving a smaller sum for distribution to the stockholders than was available at the close of the previous year.

REGULATION OF CHINESE IMMIGRATION.

The protocol celebrated in Lima on August 28, 1909, between the authorized representatives of Peru and China, and which was approved by the Department of Foreign Relations and became effective on the same date, is intended to prevent the entrance into Peru of Chinese manual laborers.

The protocol repeals the executive decree of May 14, 1909, prohibiting the entrance into Peru of Chinese emigrants having less than £500 in cash.

A Chinese subject desiring to go from China to Peru must make application to the board of commerce of the Province in which he resides for a passport, and if on examination it is found that the applicant does not require to resort to manual labor in Peru for his maintenance, he will be given a passport, which must be presented personally to a consul of Peru in China for visé and registry, for which service a charge of £1 will be made.

Should a Chinese subject desire to go from Peru to China with the intention of returning to Peru, he must obtain a passport from the Chinese consul, or a Chinese consular agent in Peru, which passport must be examined and registered in the Department of Foreign Relations before being delivered to the applicant.

Chinese subjects who wish to enter Peru from Panama, Chile, Ecuador, or other countries, must obtain a certificate from the minister, consul or consular agent of the country from which he proceeds, and, in the absence of said functionaries, from the foreign diplomatic representative in charge of Chinese interests in that country. This document, in turn, must be presented before the minister or consul of Peru in said country should Peru have such functionaries accredited there.

FOREIGN DEBT OF THE REPUBLIC.

The present debt of Peru, which may be properly called foreign, is as follows:

Peruvian Corporation—annuities of £80,000	£2,160,000
Wharves and docks	80,000
Loans, 1905, 6 per cent	500,000
Loans, 1906, 6 per cent	400,000
 Total	 3,140,000

MINERAL OUTPUT, 1908.

The following table gives the total production of precious metals in Peru during 1908:

GOLD.

	Kilos fine.	Commercial value.
Gold, metallic (bars, nuggets, dust).....	799-120	£109,139
Gold, silver, sulphides of lixiviation.....	33-989	4,642
Gold, silver, in copper bars.....	41-471	5,663
Gold, silver, in copper mattes.....	10-098	1,379
Gold and silver bullion.....	4-655	615
Silver and gold ores exported.....	12-598	1,342
Gold, silver, and copper ores shipped.....	75-079	10,253
Total.....	977-010	133,033

The metallic gold remained in this country and was converted into coin; the other products were exported to Europe and the United States:

SILVER.

	Kilos fine.	Commercial value.
Silver, metallic (bars, bullion, etc.).....	6,057-42	£20,770
Silver, metallic, in lixiviation sulphides.....	23,277-73	78,962
Silver, metallic, in copper bars.....	48,017-20	166,345
Silver, metallic, in lead bullion.....	3,156-00	10,933
Silver, metallic, in copper mattes.....	61,369-83	208,104
Silver, metallic, in ores and concentrates.....	56,931-42	165,796
Silver, metallic, in other products.....	78-34	276
Total.....	198,887-94	651,190



EXPORTS, FIRST HALF OF 1909.

The exports of the Republic of Salvador through the port of La Union, during the first half of 1909, according to figures published in the "*Diario Oficial*" of December 6 of that year, amounted to 2,169,040.81 centavos, equivalent to 867,616 United States gold. The exports through Acajutla and La Libertad during the same period, as published in the January, 1910, edition of the *MONTHLY BULLETIN*, were, respectively, 7,205,476.51 centavos, equal to \$2,882,190 United States gold, and 2,233,954.35 centavos, equivalent to \$893,582 United States gold.

The total exports of the Republic for the period, therefore, from the three ports amounted to 11,608,471.67 centavos, equivalent to \$4,643,388. Coffee was the principal item of export, the total value of that product shipped through the three ports mentioned during the half year amounting to \$831,892 United States gold.

THE MINING INDUSTRY.

With the exception of the lowlands of the coast, all the interior of the Republic of Salvador is more or less rich in the precious metals and mineral substances, and especially is this true of the Departments of Santa Ana, Chalatenango, Cabañas, Morazan, and San Miguel.

The district of Metapan, Department of Santa Ana, is exceedingly rich in iron, copper, and lead ores, and, moreover, a good grade of silver ores is found. The iron ore of this district is of excellent quality, assaying as high as 87 per cent of magnetic iron, and the deposits are said to be apparently inexhaustible. There are two small iron smelters in operation in the Republic, both of which use the antiquated Catalan system of reduction, and are not very profitable enterprises. The most desirable copper ores of the country come from the "Brujo" district, the richest veins of which contain considerable gold and silver. Good cart roads connect Santa Ana with Metapan, a distance of 56 kilometers.

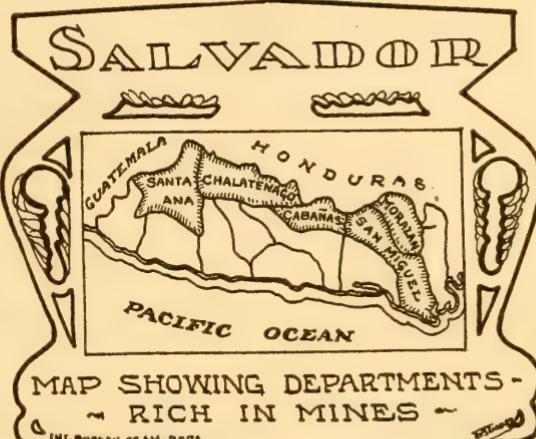
The mining industry in the Departments of Chalatenango and Cabañas is as yet in its infancy, but ores are found in this zone in many places in paying quantities, and one rich copper deposit is now being exploited and developed with considerable success. The building of cart and wagon roads from these Departments to the capital will probably exert a highly beneficial influence upon the mining industry of this district, and the lowering of freight rates that will ensue from the construction of these roads will enable considerable ore to be shipped out at a profit that can not now be advantageously handled.

The most flourishing mining district of Salvador at the present time is in the eastern part of the Republic in the Department of Morazan, where a number of foreign and domestic companies are engaged in the mining of gold and silver ores, some of which are treated in the country by the cyanide and wet processes, while others are shipped to smelters abroad. A great many mines in this Department have been entirely abandoned, owing to lack of capital and scarcity of labor, and because of the primitive methods of treating the ores. These, as well as many new mines, offer a rich field for the investment of capital and the employment of labor.

The latest available statistics of the mineral production of Salvador are for 1906, when the total value aggregated \$3,372,495 silver (\$1,264,686), nearly all of which consisted of gold and silver bullion.

TUBERCULOSIS SANITARIUM.

A tuberculosis sanitarium has been established in the vicinity of San Salvador. The open-air treatment will be employed, in con-



MAP SHOWING THE DEPARTMENTS OF THE REPUBLIC OF SALVADOR WHICH CONTAIN RICH MINERAL DEPOSITS.

formity with the latest recognized therapeutics and hygienic methods, for the alleviation and cure of consumption. The expenses of the sanitarium are to be borne from appropriations by the federal and municipal governments, contributions of industrial companies, and donations of benevolent persons and institutions. A library will be maintained for the use of the patients, and all possible measures will be employed to alleviate the condition of resident invalids.

RAILWAY CONTRACT.

A dispatch from Chiapas, Mexico, says that the contract for the 75 miles of connecting railroad between Zacapa and Santa Ana, Salvador, has been let to MYRON C. KEITH, president of the United Fruit Company. The road will be standard gauge and will be completed within eighteen months. Surveys and locations have already been made and materials ordered. Upon the arrival of the materials work will be immediately commenced from the Santa Ana end of the line.

This line will connect the Salvador Railway with the Guatemala Railway, thus making a link between the two Republics. When completed it will add much to the transportation facilities of both, and form another link in the Pan-American line.



TREATY WITH BRAZIL.

The Brazilian-Uruguayan treaty concerning the joint ownership of the Mírim Lagoon and the Jaguarão River, concluded on October 30, 1909, consists of 12 articles, as follows:

Article I: Brazil cedes to Uruguay: 1. From the mouth of the San Miguel Creek to that of the Jaguarão River, the part of the Mírim Lagoon comprised between its western shore and the new frontier which will traverse longitudinally the waters of the lagoon, according to the terms of Article III of the present treaty. 2. On the Jaguarão River, the part of the fluvial territory comprised between the right-hand or southern bank and the dividing line described in Article IV.

Art. II: The cession of the rights of sovereignty of Brazil is made under the following conditions: 1. In the absence of subsequent agreement, only Brazilian and Uruguayan vessels shall navigate and traffic in the waters of the Jaguarão River and the Mírim Lagoon. 2. The property rights acquired by Brazilians or foreigners in the islands or islets which, by virtue of the new boundaries cease to belong to Brazil, shall be maintained and respected by Uruguay in accordance with the principles of civil law. 3. Neither of the contracting parties shall establish forts or batteries on the banks of the

lagoon, or those of the Jaguarão River, or upon any of the islands that belong to those waters.

Art. III: Beginning at the mouth of the San Miguel Creek, where the fourth large monument which marks the frontier of 1853 is found, the new frontier will traverse longitudinally the Mírim Lagoon to the top of Rabotieso Point on the Uruguayan bank, by means of a broken line consisting of as many straight lines as may be necessary to cover the average distance between the principal points of the two banks, or, if the bottom should be shallow, by as many straight lines as may be necessary to follow the main channel of the lagoon referred to. From the top of the Rabotieso Point the dividing line will take such a northeasterly direction as may be necessary to pass between the islands called Taquary, leaving on the Brazilian side the island farthest to the east, and two islets that are together, and continuing from there until it reaches the vicinity of Parobé Point, also situated on the Uruguayan side of the deepest channel until it faces Muniz Point on the Uruguayan bank, and the Latinos Point, or Fanfa, on the Brazilian bank, continuing from that intermediate point and the Brazilian Island of Juncal until it reaches the mouth of the Jaguarão River, at which point is encountered, on the left-hand or Brazilian bank, the fifth large monument of 1853, and on the right-hand or Uruguayan bank the sixth intermediate monument.

Art. IV: From the mouth of the Jaguarão River, upstream, the frontier will continue along the thalweg of that river to the point of confluence with the lagooens creek on the left-hand bank; from thence, upstream, the dividing line will follow the average distance between the banks of the Jaguarão, and from thence the average distance between the banks of the Jaguarão Chico, or Guabijú, at whose confluence the sixth large monument of 1853 is situated, and finally will continue stream upward through the bed of the Mina brook, indicated by the intermediate monuments seventh and eighth.

Art. V: Within the period of one year the mixed commission shall prepare a map or chart of that part of the Mírim Lagoon which extends to the south of Juncal Point, and a map of the Jaguarão River from its mouth to Lagooens Creek, taking the soundings and the necessary and geodetic measurements to indicate the new frontier.

A89. VI: The Mírim Lagoon and the Jaguarão River are hereby declared free to the merchant vessels of the two nations, and also free transit between the ocean and the Mírim Lagoon, through the Brazilian waters of San Gonzalo River, Los Patos Lagoon, and the bar of the Rio Grande, is accorded to Uruguayans.

Article IX provides that war vessels of Uruguay shall have free transit in Brazilian waters, and shall navigate, the same as Brazilian vessels, the Jaguarão River and the Mírim Lagoon, or may anchor in the aforesaid waters. The contracting parties agree not to main-

tain in the Mírim Lagoon or its affluents more than three small war vessels.

Article XI provides that the contracting parties shall conclude, as soon as possible, a treaty of commerce and navigation based on the most liberal principles, and having in view the proper protection of legitimate commerce on the fluvial and land frontiers of the two countries.

The last article states that the ratifications shall be exchanged in Montevideo or Rio de Janeiro at the earliest date possible.

CANALIZATION OF THE RIO ROSARIO.

Consul FREDERICK W. GODING, of Montevideo, states that among the new works planned by the Government of Uruguay for the improvement of harbors and rivers is the canalization of the Rosario River, which is to be proceeded with at once.

At the mouth of the river a canal 1 kilometer (0.62 mile) in length will be built to a depth of 10 feet at the normal height of the water. A retaining wall on each side will protect it from the drainage from the Rio de la Plata and cause sufficient "wash" to maintain the proper depth. Along the course of the river six similar canals will be constructed, while at Puerto Rosario, the terminus, it will be dredged and retaining walls and a wharf will be erected.

RATES FOR BERTHING VESSELS IN MONTEVIDEO.

Ocean and river steamers and sailing vessels are now allowed to berth at the new Montevideo wharves under the conditions prescribed by the council of administration of the port. Until the legislative body establishes a permanent tariff the following will be charged per linear meter (39.37 inches) per day or fraction.

	Centesimos. Cents.
Ocean steamers-----	25=26.85
Ocean sailing vessels-----	20=20.68
River steamers-----	125=12.925
River sailing vessels-----	10=10.34

RAILWAY NOTES.

In the report of the Central Uruguay Railway for the year ended June 30, 1909, gross earnings are reported in the sum of £557,122, as compared with £508,044 in the previous year, with net profits of £269,617, or an increase of £33,677.

For the Central Uruguay northern extension net profits of £39,294 are reported, as against £34,553 in the preceding year, and on the eastern extension net profits of £72,807, as compared with £61,736 in 1907-8. On the latter line a section of 33 miles was opened to the public in November, 1908, additional sections being opened in July and August, 1909, respectively, so that the total length now being operated is 246 miles.

OPPORTUNITIES FOR MINING INVESTMENTS.

The United States consul in Montevideo has made an interesting report on the opportunity for investing in mining properties in Uruguay, in which he states that the mines operated in the gold-bearing provinces of Treinta y Tres, Montevideo, and Rivera produced in 1908 gold to the value of \$46,586. Much of this territory is virgin, and many new alluvial deposits and auriferous quartz lodes could be profitably exploited by using modern machinery and models.

In several of the provinces, and especially in Cerro Largo and Santa Lucia, an excellent quality of coal exists in paying quantities, while petroleum, asbestos, antimony, graphite, silver, copper, and iron abound in different parts of the Republic. In many portions of the country valuable quarries of limestone, granite, slate, marble, porphyry, basalt, and quartz are found, while precious stones, such as amethysts of different colors, agates, rock crystals, and water stones exist in considerable quantities.

The Government of Uruguay encourages the exploitation and development of its mines by exempting from the payment of customs duties the tools and machinery used in this industry, and by protecting and aiding in every way possible those who engage in mining enterprises.

VENEZUELA

FOREIGN COMMERCE, FIRST HALF OF 1909.

The United States consul at La Guaira, Mr. ISAAC MANNING, reports that the foreign trade of Venezuela during the six months ending June 30, 1909, was represented by imports valued at Bs. 23,253,913.72 (\$4,488,005.31), and exports, Bs. 50,505,791.46 (\$9,747,617.75). This total of more than \$14,000,000 indicates a revival of trade transactions as compared with the preceding year, when, throughout the twelve months, the amount attained for import and export valuations was \$24,339,640.

La Guaira, Puerto Cabello, and Maracaibo have about equal rank as ports of shipment, each figuring for a little less than \$2,500,000, Ciudad Bolivar ranking next with \$1,325,251.

Leading ports of entry are La Guaira and Maracaibo, followed by Ciudad Bolivar and Puerto Cabello, in the order named.

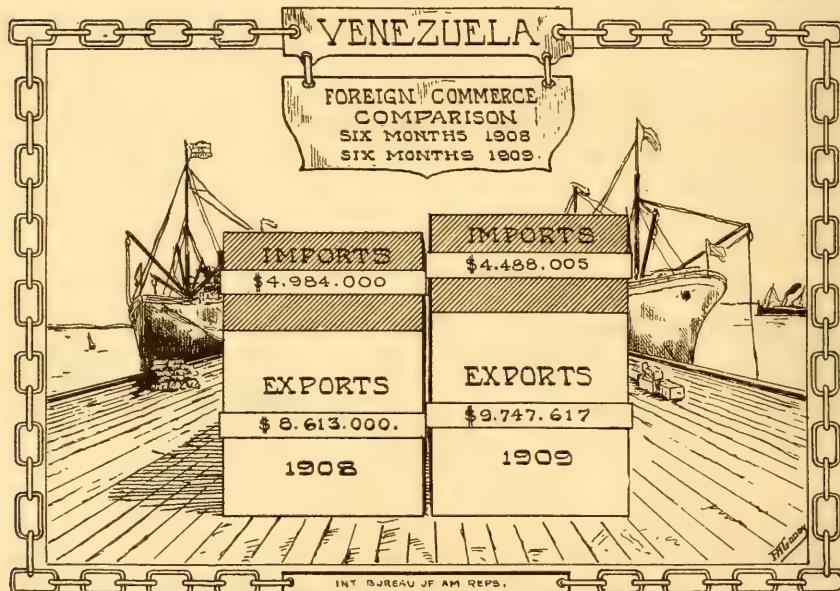
INCREASED TELEGRAPHIC COMMUNICATION.

Reporting on the improved telegraphic facilities of Venezuela, United States Consul MANNING states that direct connection is now had from Caracas to the Republic of Ecuador via Bogota, Colombia.

The Government is also preparing to construct a line through the country south of the Orinoco to San Fernando de Atabapo, on the headwaters of the Manaos River near the borders of Colombia and Brazil. It is proposed, if possible, to extend this line to connect with the Brazilian system and, through agreements with other governments, to form an international Latin-American system.

DELEGATES TO INTERNATIONAL SANITARY CONVENTION.

The International Bureau of the American Republics has been informed through the Department of State of the United States that the Venezuelan Government has selected Drs. PABLO ACOSTA ORTIZ and LUIS RAZETTI as delegates from Venezuela to the Fourth International Sanitary Convention at San Jose, Costa Rica.



COMPARATIVE STATEMENT OF THE IMPORTS AND EXPORTS OF VENEZUELA FOR THE FIRST HALF OF THE YEARS 1908 AND 1909.

The two delegates are among the most eminent men of their profession in the Republic and are president and vice-president, respectively, of the Public Hygiene Commission. Doctor ACOSTA is the most noted surgeon in Venezuela and Doctor RAZETTI has gained a reputation through his persistent and intelligent campaigns against alcoholism, tuberculosis, and infant mortality.

TAX ON SLAUGHTERED CATTLE IN CARABOBO.

By a decree of November 15, 1909, an additional tax of Bs.25 (\$4.83) is to be levied on each cow slaughtered for consumption in the State of Carabobo. The amount of the tax had previously been fixed at Bs.20 (\$3.86) a head, consequently the total tax as at present prescribed will amount to Bs.45 or \$8.69 on each cow killed.

INTERNATIONAL BUREAU OF AMERICAN REPUBLICS

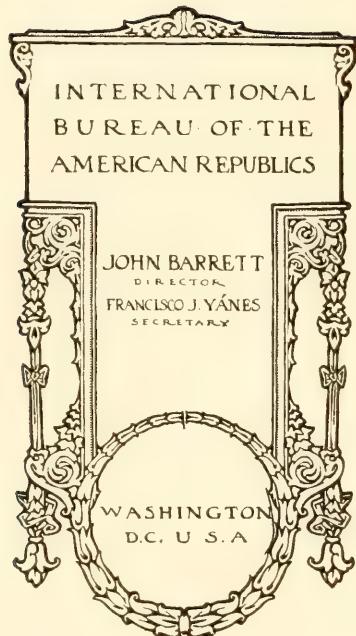
BULLETIN
OF THE INTERNATIONAL BUREAU OF THE
AMERICAN
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MARCH

1910



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Double number (Bulletin in English, Spanish, Portuguese, and French), \$3 per year in all countries of the International Union; in other countries, \$4. Single number, 40 cents.



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SEÑOR DON JOSÉ DOMINGO DE OBALDÍA, PRESIDENT OF PANAMA, WHO DIED
MARCH 1, 1910.

Doctor Obaldía was one of the leading statesmen of his country. During his long life he filled many important political positions, the last being that of Minister to Washington, which post he left to accept that of the Presidency, to which he was inaugurated in October, 1908. Señor Obaldía always took the greatest interest in everything that pertained to the welfare of Panama, and his loss will be deeply felt not only by his own people but by those of all Pan America.

BULLETIN

OF THE INTERNATIONAL BUREAU

OF THE AMERICAN REPUBLICS



VOL. XXX.

MARCH, 1910.

NO. 3

THE Director of the Bureau has had great pleasure in recently announcing that the new building of the International Bureau will be dedicated on Wednesday, the 6th of April. After consultation with the President of the United States, the Secretary of State, the Dean of the Latin-American Diplomatic Corps, the Mexican Ambassador, Mr. ANDREW CARNEGIE, and Senator Root, this day was set for the official opening. The programme will not be as elaborate or spectacular as that of the laying of the corner stone, but, while simple in its character, it will be just as impressive. The dedication of a new building can not be accompanied by special decoration, because the permanent architecture and finish of the structure must be seen in its actual form and not covered by temporary ornamentation. The fact that addresses will be delivered by President TAFT, Secretary KNOX, the Mexican Ambassador, Mr. ANDREW CARNEGIE, and Senator Root will make the occasion a memorable one in the history of the International Bureau and of the Pan-American Union. It will be a source of great regret to everybody that the Brazilian Ambassador, who made such a notable speech at the corner-stone laying in May, 1908, will not be one of the participants in the dedication of a building in which he took such a deep interest. The occupation of the building will take place in one month less than two years from the date of the corner-stone laying. Considering the character of the structure, its unconventional architecture and arrangements, and the care that has been given to every detail of its construction, this is a good record, and credit is due to the architects, ALBERT KELSEY and PAUL P. CRÉT, of Philadelphia, Pennsylvania, and the contractors, THE NORCROSS BROTHERS COMPANY, of Worcester, Massachusetts. Special effort has been made to complete it in time for dedication before many of the Latin-American diplomats have left Washington to attend the next Pan-American Conference in Buenos Aires. The more the building is studied by those interested in the International Bureau, the greater is their satisfaction that there is to be such a home as this for an institution devoted to the advancement of Pan-American

commerce, friendship, and peace. When done it will represent an investment approximately of \$1,000,000, but this sum is only a small measure of the advantages that will be derived from the work which will be carried on within its walls.

AN OPINION THAT IS TO BE PRIZED.

In view of the recent death of JOAQUIM NABUCO, the distinguished Ambassador of Brazil, it is appropriate to publish here a personal note written to the Director only a short time before the Ambassador's demise. It shows his kindly attitude toward the Bureau and his interest in its work. Under date of January 7 he wrote:

DEAR MR. BARRETT: I thank you for the New Year's issue of the BULLETIN. You have made it the most interesting review for the two Americas. I congratulate you on your work, and I am glad that my term of service in Washington coincided with yours.

Hoping to continue some time longer to serve with you here the Pan-American cause, I am,

Very truly, yours,

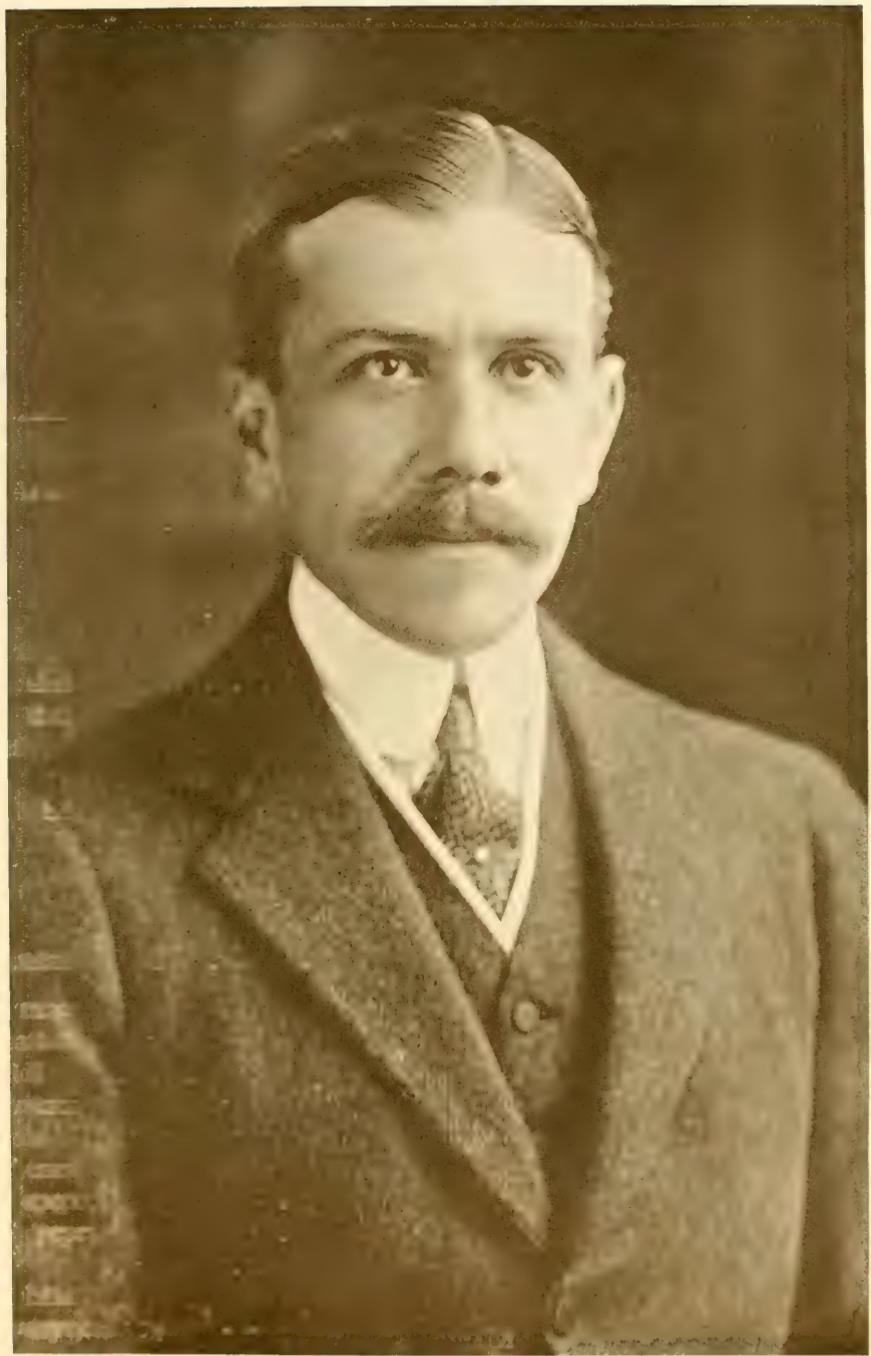
JOAQUIM NABUCO.

THE THIRD ASSISTANT SECRETARY OF STATE OF THE UNITED STATES.

CHANDLER HALE, who was appointed Third Assistant Secretary of State on September 25, 1909, was born in the District of Columbia March 2, 1873. He served as assistant secretary of the American delegation to the International Bimetallic Conference at Brussels, held in 1892, and was appointed secretary of the embassy at Rome April 5, 1897, but retired in December of the same year. He was appointed secretary of legation at Vienna in 1901 and secretary of the embassy at the same place in the following year, which position he resigned in 1905. Mr. HALE also served as secretary of the American delegation to the Second Peace Conference at The Hague in 1907. He is the son of Senator EUGENE HALE, who for almost thirty years has continuously represented the State of Maine in the United States Senate.

CONGRESSIONAL ATTITUDE TOWARD THE BUREAU.

There could be no more practical evidence of the growing appreciation of the broad and useful work of the International Bureau than the attitude of the House Committee on Foreign Affairs, representing the sentiment of the whole House of Representatives, in the matter of increasing the yearly quota or appropriation of the United States from \$56,000 to \$75,000. When the Director appeared before the committee, by its invitation, he was given a most attentive hearing by a largely attended meeting, and the increase was voted unanimously. Several members of the committee took occasion to commend the activity and usefulness of the institution and referred to the popularity of its publications among



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HON. CHANDLER HALE,

Third Assistant Secretary of State of the United States.

their constituents. In this connection it is interesting to note that whereas only 10 per cent of the total membership of the Senate and House of Representatives of the United States made any demand upon the bureau three years ago, when the present administration of the bureau took charge, over 90 per cent have utilized it during the past year in some practical manner. This is shown by the correspondence and records of the institution. At one time the bureau was often described as "the fifth wheel of the Government coach," but now that criticism has entirely passed and its value as an international agency for the advancement of commerce and comity is everywhere admitted. This reference is made, however, with due consideration for the great improvements in the organization and work of the bureau which yet can be made and which can only be accomplished in the course of time. The Director, in expressing his appreciation of the kindly attitude of Congress and of the press of the country, is keenly aware of the many points in which the work of the institution must be improved. And he asks, therefore, not only for the charity but the cooperation of all friends of Pan-Americanism in gradually raising its standards and its influence.

REPORTS OF INCREASED TRAVEL TO SOUTH AMERICA.

The Lampert & Holt Steamship Company, through their agents, Busk & Daniels, of New York, report a considerable increase in the inquiries they are receiving in regard to the South American trip. This is due not only to the publicity matter which they have been sending out about their steamers and South America, but to the continued efforts of the International Bureau to persuade people who intend to travel that they should change their usual programme of going to Europe or Asia to one which will include South America. Nearly all travelers and business men who have recently undertaken this journey come back enthusiastic over it and proceed to urge their friends to follow in their footsteps. The great Hamburg-American excursion steamer *Bluecher* sailed from New York on January 22 with some 375 passengers for the trip all the way down the east coast of South America to the Strait of Magellan and back. The success of this excursion will undoubtedly cause the Hamburg-American and other steamship companies to undertake more frequent excursions in the future, and thus do much toward awakening the interest of manufacturers, business men, and travelers in the Latin-American countries.

SPECIAL FEATURES OF THIS BULLETIN.

Among the different features of this issue special attention is called to "The Wool Industry in the Americas," prepared by Mr. WILLIAM C. WELLS, one of the experts of the Bureau's staff; "Mexico's Military

Training School," by Mr. JOSE ROMERO; "Brazil's New Port: Rio Grande do Sul," by Mr. C. F. CARTER; "The Palace of Justice in Cartago, Costa Rica," by Dr. ALBERT HALE, of the bureau staff; "Tisingal, the Lost Gold Mine of Panama," by Mr. CHARLES M. BROWN; "The Reception of the new Minister of Colombia," and LARDNER GIBBONS "Explorations in South America."

THE UNITED STATES MINISTER TO CUBA.

JOHN BRINCKERHOFF JACKSON, recently appointed Envoy Extraordinary and Minister Plenipotentiary to Cuba, was born at Newark, New Jersey, August 19, 1862. He graduated from the United States Naval Academy at Annapolis, Maryland, in 1883, and after a two years' cruise in European waters, part of which time he served as junior aid to the commander in chief of the European squadron, he passed his final examination and, on July 1, 1885, was commissioned an ensign in the United States Navy, but resigned June 30, 1886, in order to study law in the New York University law school, being admitted to the bar in 1889. His first diplomatic position was that of second secretary of the legation at Berlin, to which he was appointed in 1890, and in 1894 was promoted to secretary of the embassy at that place, where he also served as chargé d'affaires on several occasions. Later he was offered, and accepted, the mission to Chile, but before proceeding to that country was appointed, October 13, 1902, Minister to Greece, Roumania, and Servia, and on June 5, 1903, was also appointed diplomatic agent in Bulgaria. Mr. JACKSON represented the United States at the coronation of KING PETER, of Servia, in 1904, and received the appointment as Minister to Greece and Montenegro and diplomatic agent in Bulgaria in 1905, being transferred as Minister to Persia in 1907. He was a delegate to the International Maritime Law Conference in Hamburg, 1902, the International Archæological Congress in Athens, 1905, and served as American representative at the Olympic games, held in the last-named city in 1906. He is a member of the New York Bar Association and of the following clubs: Union League, Lawyers', Army and Navy, University (New York), Rittenhouse (Philadelphia), Metropolitan (Washington), Casino (Berlin), and Imperial Yacht (Kiel, Germany). He also holds the degree of A. M., conferred upon him by Princeton University in 1896.

MR. ADAMS AND THE MONTHLY BULLETIN.

The Director of the International Bureau takes advantage of this opportunity to commend the assistance he has received during the last two years from Mr. FRANKLIN ADAMS in evolving the BULLETIN into a publication of such character and appearance that it is being generally



HON. JOHN B. JACKSON,
Envoy Extraordinary and Minister Plenipotentiary of the United States to Cuba.

appreciated in a practical way by the press of both North and South America and by all persons interested in Pan-American affairs. Before Mr. ADAMS became associated with the Bureau he had traveled much in Latin-American countries and acquired that familiarity with their resources and acquaintance with their peoples which have enabled him to bring to the BULLETIN a knowledge which is essential for its usefulness and influence as a Pan-American publication. It is fitting that this reference to Mr. ADAMS's services should be made at a time when the BULLETIN has made another progressive change not only in its appearance, but in the quality of its contents.

UNITED STATES AT THE COMING PAN-AMERICAN CONFERENCE.

As the time draws nearer for the Fourth International American Conference, which will convene at Buenos Aires, Argentina, on July 9, the interest is growing all over North and South America in the questions that will come before this great international gathering. The urgent deficiency appropriation bill of the United States Congress, as reported by the Committee on Appropriations to the Senate, at this writing carries a provision of \$100,000 for the participation of the United States in this conference and the sending of a worthy delegation. Nearly all of the countries have now appointed their delegations, and the personnel of these shows the general recognition by the different nations of the importance of the conference. It is understood that the United States will be represented by men who appreciate fully the necessity of developing closer relations between North and South America, and who will do all in their power to promote Pan-American commerce and comity.

UNITED STATES EXHIBITS AT BUENOS AIRES AND SANTIAGO.

At this writing the indications are most favorable for a creditable participation of the United States in the International Agricultural, Fine Arts, and Transportation Exhibitions to be held in Buenos Aires, Argentina, from May until November of this year, and in the International Exhibition of Fine and Applied Arts at Santiago, Chile, which will take place from September to November. The urgent deficiency appropriation bill of the United States Congress, as reported from the Senate Committee on Appropriations, contained a provision appropriating \$75,000 for the representation of the United States. By the time the BULLETIN goes to press the preparation of exhibits should be well under way. The International Bureau has done everything in its power to call attention throughout the United States and other American countries to these Argentine and Chilean celebrations, and it is hoped that much good will result from this show of interest on the part of the United States in such important undertakings of its sister republics. The Agricultural

Department will send an exhibit of agricultural development methods and progress in the United States which will prove of particular value to an agricultural country like Argentina, while the fine arts exhibits will give the people of South America a better idea than they have had before of the artistic tendencies of their northern neighbor.

THE UNITED STATES MINISTER TO CHILE.

HENRY PRATHER FLETCHER, recently promoted to the position of Envoy Extraordinary and Minister Plenipotentiary to the Republic of Chile, was born in the State of Pennsylvania in 1873. He studied law with his uncle, Judge D. WATSON ROWE, and was later admitted to the bar. During the Spanish-American war he enlisted with the "Rough Riders" and saw service at San Juan and El Caney, afterwards proceeding with the army to the Philippines, where he served as first lieutenant and battalion adjutant of the Fortieth Infantry. His first diplomatic service was in Havana as second secretary of legation, in 1902; in 1903 he was appointed second secretary of legation at Peking, and promoted to secretary of legation at Lisbon, Portugal, in 1905, where he served as chargé d'affaires ad interim on several occasions. Mr. FLETCHER was appointed secretary of the legation at Peking on April 26, 1907, where he remained until promoted to his present post, having also served as chargé d'affaires in China during the absence of the Minister.

THE BULLETIN MAP OF THE AMERICAS.

Beginning with this issue of the BULLETIN a map is given on the back cover, which is placed there in response to a great many requests from readers that the BULLETIN should carry in each issue a map of Latin America, so that the principal points mentioned in the descriptive matter can be easily located. When it is remembered that 9,000,000 square miles are occupied by Latin-American territory, it is easy to imagine the vast possibilities before this section of the Western Hemisphere. Its extent is about three times that of the connected area of the United States, and yet few people realize this fact. When it is borne in mind, moreover, that all of the United States proper could be placed inside of Brazil, the respect of the average reader for the countries of South America is at once increased. Argentina would cover all that portion of the United States lying east of the Mississippi River; Chile, if laid down on the west coast of the United States and British Columbia, would not only cover it but reach halfway into Alaska; Bolivia would hold Texas twice over, while Peru would cover all the Atlantic States from Maine to Georgia. Into Colombia could be placed the greater portion of Germany and France, and Venezuela would take care of two Spains. Into Mexico could be placed all the Central and Western States bordering upon the Mississippi River.



HON. HENRY P. FLETCHER,
Envoy Extraordinary and Minister Plenipotentiary of the United States to Chile.

THE DEMAND FOR THE CHILEAN HANDBOOK.

Practical evidence of the growing interest in Latin-American countries is shown by the fact that within the last few months 750 copies of the new handbook of Chile have been purchased by libraries, booksellers, newspapers, and business houses. Within the next year the Bureau hopes to issue several new handbooks on other countries to take the place of the old ones whose editions are entirely exhausted. These are sold at the cost price to the Bureau of having the material prepared and printed. They represent no profit whatever and can not be distributed free, as there is no provision for doing the printing and binding at the Government Printing Office.

EX-SENATOR DAVIS AND THE PAN-AMERICAN RAILWAY.

Ex-United States Senator HENRY GASSAWAY DAVIS, a delegate of the United States to the First and Second Pan-American Conferences, and one of the leading men in railway circles of the United States, is enthusiastic over the question of the building of the Pan-American Railway which will put New York City and Washington in touch by rail with the great capitals of South America even as far south as Buenos Aires in the Argentine Republic and Santiago in Chile. Assisted by Gen. GEORGE W. DAVIS, he is preparing a memorandum that will be placed in the hands of the United States delegation which goes to the Fourth Pan-American Conference in Buenos Aires next July for the purpose of securing some action by all of the governments favorable to this enterprise. He gave a beautifully appointed dinner in the Shoreham Hotel in honor of the Secretary of State, with the object of promoting interest in the Pan-American Railway, and had as his guests nearly all of the diplomatic representatives of those countries of Latin America through which the railroad would run. No speeches were made, beyond brief remarks by Senator DAVIS and by Secretary KNOX, but the applause which greeted their observations demonstrated the interest in the great undertaking which Senator DAVIS favors.

THE CONSUL-GENERAL OF PANAMA IN NEW YORK CITY.

MANUEL DE OBALDIA, the consular representative of the Republic of Panama in New York, was born in David, Panama. At the age of 15 years he left his native country and has since resided continuously in the United States and Europe. In 1903 he accepted a clerical position in the office of the Consul-General in New York, of which office he assumed charge as Vice-Consul upon the withdrawal of the Consul-General, Dr. RAUL A. AMADOR. In 1908 he was appointed Consul from Panama in Antwerp, Belgium, which position he was obliged later to resign on account of his health, and in October, 1909, was appointed to his present post.



SEÑOR DON MANUEL DE OBALDIA,
Consul-General of Panama to the United States in New York.

EDITORIAL REFERENCES TO AMBASSADOR NABUCO.

The death of the Brazilian Ambassador, Mr. JOAQUIM NABUCO, was followed by numerous editorial references to his great ability and influence. These appeared not only in the papers of Washington, the capital of the country, but in those of the distant interior. From the latter we select one of particular interest, which appeared in "The Nashville Tennessean" in its issue of January 19. Under the heading of "A Notable Ambassador" this paper says:

In the death of Mr. JOAQUIM NABUCO, the Ambassador of Brazil in Washington, this South American Republic lost one of its most eminent citizens and the United States was deprived of one of its best friends. Like several other Ambassadors now accredited to Washington, Mr. NABUCO was a man of great ability, and had many achievements to his credit at home before he was intrusted with the American post. As a literary man and jurist he was well known throughout South America. He was a prominent member of the Brazilian Parliament for years, and was one of the leaders in abolishing slavery under the Empire. After the abdication of DOM PEDRO he became equally prominent in the affairs of the Republic.

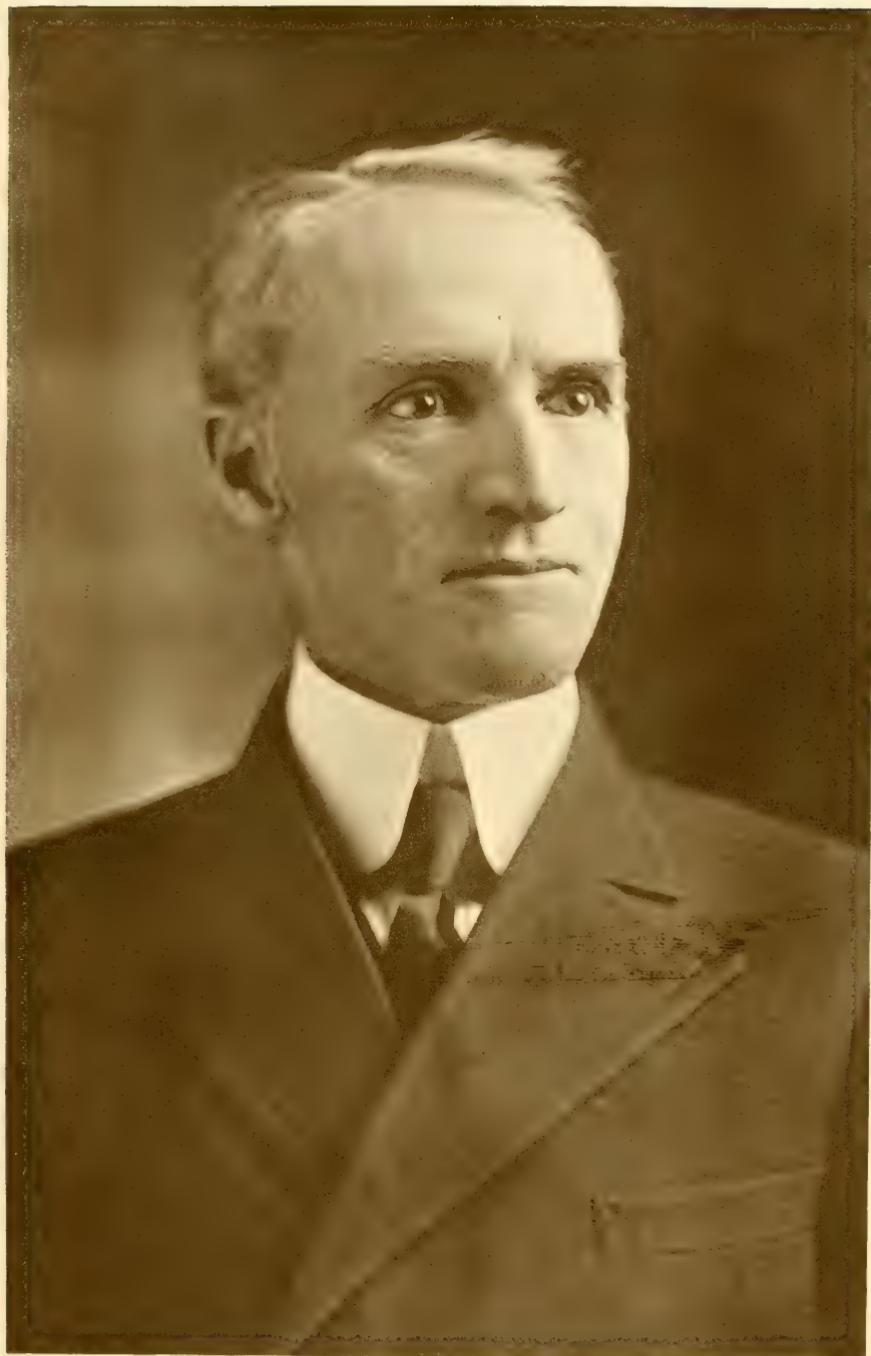
Mr. NABUCO was 60 years old and had spent most of his life in the service of his country. In his early manhood he served at Washington as an under-secretary to the Brazilian Minister, so when he was sent to this country five years ago to become Ambassador, he knew many prominent Americans and was familiar with the language and customs of the country.

The American people had no greater admirer than Mr. NABUCO. He traveled very extensively in this country, and was always greatly impressed by the intelligence, education, and adaptability of all Americans. He frequently said Americans are so self-reliant and adaptable that nearly every man and woman one meets could be intrusted with the duties of President and mistress of the White House. This was the gracious Latin way of saying that Americans are of uniform intelligence and independence in all sections. He believed this largely due to transportation facilities and salubrious climate, and exerted every effort to have the vast undeveloped territory of Brazil supplied with railways.

Mr. NABUCO was typical of the substantial Portuguese Republic he represented. He stood for the spirit of peace and progress which is rapidly making Brazil a world power, the push and industry which are converting Rio Janeiro into one of the most beautiful capitals in the universe. He was a liberal, broad-minded gentleman, whose efforts did much to give Brazil the important place it deserves in the congress of nations.

THE BUILDER OF THE ECUADOR RAILWAY.

A recent visitor to Washington who has been prominently identified with railroad construction in South America is ARCHER HARMAN. He was visiting this country on a brief business trip, and now has returned to Ecuador, making at the same time a trip down the west coast of South America in his yacht. Mr. HARMAN is a great believer in the future of Ecuador, as is proved by the large amount of money he has invested in the building of the railroad from Guayaquil, the port of Ecuador, to its capital city, Quito. In his opinion Ecuador has a great future before it in agricultural and industrial development, but the



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PHILIP C. HANNA,
Consul-General of the United States at Monterey, Mexico.

realization of this depends much upon the successful sanitation of the port of Guayaquil and the opening of the Panama Canal. There are no better harbors on the coast line from Panama to the Straits of Magellan than that of Guayaquil. Considering, therefore, the wonderfully productive country there is back of it, not only in the lowlands but in the high plateaus, Guayaquil ought to experience a remarkable growth when the conditions of health and of commerce are improved by sanitation and the completion of the Isthmian waterway. Mr. HARMAN has promised to write for the BULLETIN the story of the building of his railway. This will probably be published in the June issue, and should prove most interesting.

THE UNITED STATES CONSUL-GENERAL AT MONTEREY, MEXICO.

PHILIP C. HANNA was born June 27, 1857, at Waterloo, Iowa. He attended the public schools of his native city and graduated from Chesbrough College Institute, commencing his business career by engaging in banking. In 1891 Mr. HANNA entered the diplomatic service as Consul at La Guaira, Venezuela, but retired in 1894. He was appointed Consul at Trinidad in 1897 and transferred to Porto Rico the same year, again retiring from the service April 21, 1898. He received the appointment as Consul-General for northern Mexico, with headquarters at Monterey, in 1899, which post he has filled to the present time.

LATIN AMERICA AT THE UNIVERSITY OF PENNSYLVANIA.

The Cosmopolitan and Latin-American Clubs of the University of Pennsylvania gave on January 13 a "Latin-American Night," which was largely attended by the students of the university and their friends. The programme included an address by the Director of the International Bureau on the subject of "The Progress of Pan-Americanism," and a series of illustrations of the principal Latin-American countries and cities, thrown upon a large screen, and described by students of these countries in attendance at the university. There were also some excellent musical numbers and other interesting features presented by the members of the Latin-American and Cosmopolitan clubs. The president of the former is VENANCIO B. GALEANO, and of the latter RASMUS S. SABY, both of whom are young men of marked ability. Dr. L. S. ROWE, of the university faculty, and a well-known authority on Latin-American countries, introduced the Director; and the other participants, aside from the presidents of the two clubs, included L. C. DELGADO, A. CRESPO, P. A. CHAPA, A. P. CRESPO, M. DE CASTRO, G. ESCANAVERINO, C. VILLAVICENCIO, R. SOUZA, E. SOLIS, and M. T. DE CASTRO.

AN INTERESTING ADDRESS BY FORMER UNITED STATES CONSUL COREY.

It is gratifying to note that the number of men of standing and knowledge who are awakening public sentiment in the United States to the importance of the Latin-American field of trade is increasing. There has recently come to the Bureau an interesting address, delivered before the New York Piano Manufacturers' Association, on January 20, by Hon. GEORGE J. COREY, formerly United States consul to Amsterdam. In it he devotes much space and attention to the importance of the Latin-American field, and points out with detail its wonderful resources and commercial possibilities.

A WOMAN'S CLUB STUDYING SOUTH AMERICA.

An example of the work of education that is going on in the interior of the United States in regard to Latin America is illustrated by a pamphlet received from the Colonial Club, of Canajoharie, New York, an organization whose membership includes the more prominent women of that city. In the programme of their meetings from October 2, 1909, to April 30, 1910, they take up some feature of South American history, progress, or general development. Among the titles of these discussions we note: "The Incas; the People and their Civilization," "Modern Peru," "Rivers of South America," "Chile, the Yankee-Land of South America," "Exports of South America," "Presidents of South America," "Bolivar, the Washington of South America," and "The International Bureau of the American Republics." The BULLETIN is grateful to one of the members of the club, Miss GRACE L. COOK, for providing it with a copy of the programme.

THE UNITED STATES CONSUL AT VALPARAISO, CHILE.

ALFRED A. WINSLOW was born in 1854 on a farm in Lake County, Indiana, and received his early education in the common schools of his native county and at Valparaiso University, Valparaiso, Indiana. He studied law for some time and taught school for ten years, but gave up the profession of teaching for that of journalism, founding in 1881 the "Hammond Tribune," which he published for fifteen years. He assisted in organizing the meat-inspection forces of the Government at Chicago, Illinois, and Hammond, Indiana, having received an appointment as assistant inspector in the Bureau of Animal Industry. Mr. WINSLOW was also for a short time city treasurer of Hammond, Indiana, and assisted in taking the Government Census of 1890. In 1898 he accepted the consulship at Liege, Belgium, from which post he was promoted in 1902 as Consul-General to Guatemala, and in 1906 was transferred to Valparaiso as Consul.



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ALFRED A. WINSLOW,
Consul of the United States at Valparaiso, Chile.

DR. ALBERT HALE IN CENTRAL AMERICA AND MEXICO.

Dr. ALBERT HALE, of the staff of the International Bureau, is now making a careful trip through Panama, Costa Rica, Nicaragua, Honduras, Salvador, Guatemala, and Mexico, studying material and commercial conditions preparatory to compiling a series of valuable reports on the potentialities and possibilities of these countries. Before Doctor HALE became associated with the Bureau he had traveled extensively through South America and written an interesting book entitled "The South Americans." Letters received from him confirm the contention of the Director in different addresses he has delivered and the reports already made by this Bureau to the effect that all of the Central American countries have a great future before them, and offer remarkable opportunities for the development of commerce and the investment of capital.

THE NATIONAL BOARD OF TRADE AND THE INTERNATIONAL BUREAU.

At the recent meeting in Washington of the National Board of Trade the Hon. FRANK D. LA LANNE, president of that organization, made the following reference in his report to the International Bureau:

Thanks to the same form of government as our own, and to the earnest work of Secretary Root, the Latin-American Republics are warmly our friends. Let this board advocate even closer relations with them in a commercial and in a friendly way and do all that it can to encourage intercourse and traffic. I think we owe very much to the Bureau of the American Republics, at the head of which is Hon. JOHN BARRETT. He has been consistent, and unremitting, in fostering the best relations and increasing our commercial intercourse with those nations.

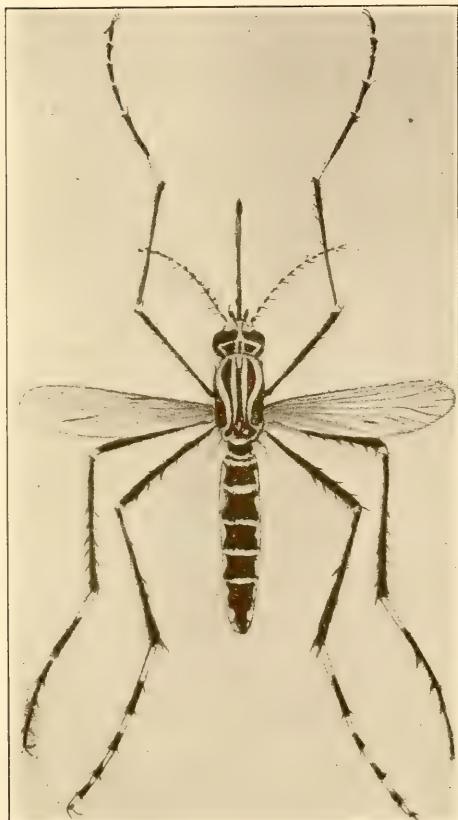


(From *La Ilustración Sud America*.)

PRESIDENT MONTT, OF CHILE, AND HIS WIFE, DOÑA SARA DEL CAMPO DE MONTT, IN THE BEAUTIFUL PARK AT LOTA.

BOOK NOTES

"Mosquito or Man? The Conquest of the Tropical World." By Sir ROBERT W. BOYCE. New York, The Dutton Company, 1909, xvi, 267 p., plates. Size 6 $\frac{1}{4}$ by 9 inches. Price \$3.50 net.



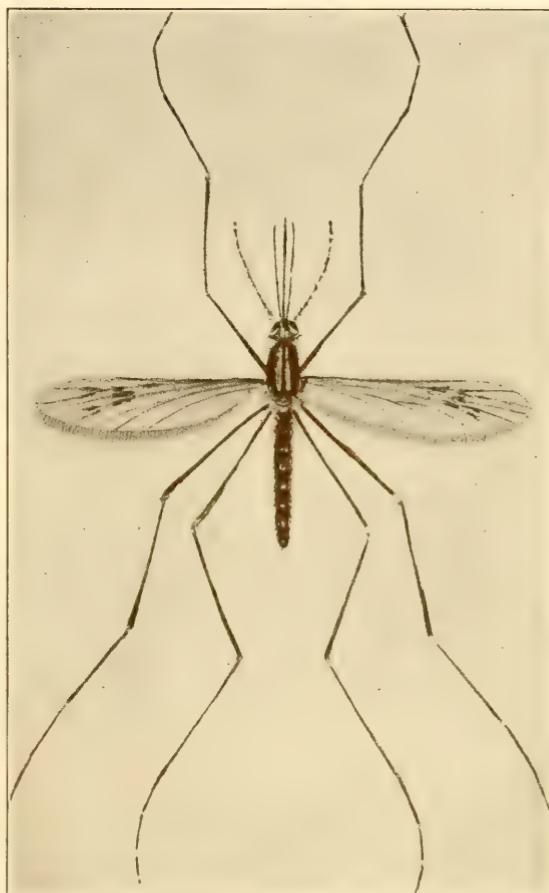
THE YELLOW FEVER MOSQUITO—KNOWN TO SCIENTISTS AS STEGOMYIA CALOPUS.

Yellow fever is one of the very old diseases of mankind in the New World. The Aztecs called it *malazahuatl*, and because of its ravages among the early explorers it was known as the sickness of the "Conquistadores." The lyre pattern on the back and the striped legs make this mosquito easily recognized.

against malaria and yellow fever that the wealth of the equatorial countries can be put at the disposal of the civilized world. The doctrine of applied hygiene will be one of the distinctive advances made in

This book is a most notable addition to the record of bacteriological investigation that has been going on during the last half century and contains much valuable information on prophylaxis in its relation to malaria and yellow fever. As these two diseases are most prevalent throughout Latin America, the latter in olden times being known as the disease of the *conquistadores*, the subject of this book should be a most interesting one to readers of the BULLETIN. The wonderful impetus to commerce with tropical lands that can be directly traced to improved sanitary conditions in the West Indies, Central and South America, conditions that owe their origin to the result of the researches in the field of fever, can be only vaguely estimated. The author is most happy in his choice of title, "Mosquito or Man? The Conquest of the Tropical World," for this phrase summarizes the situation. It is only by the successful fight

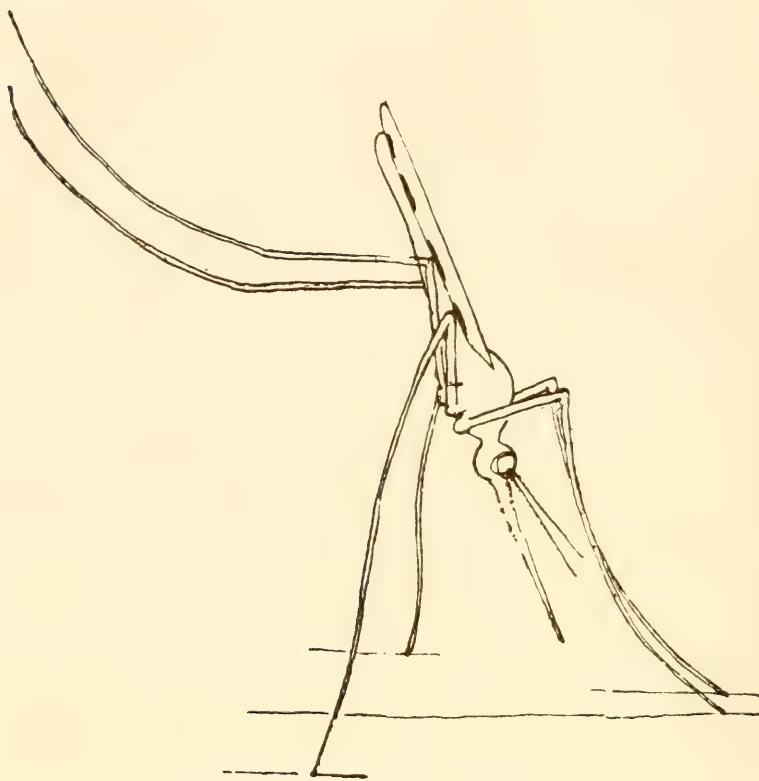
medical practice in the twentieth century. In this connection it is curious to note how hard it is to kill traditional misbeliefs, and even now, when the truth of the theory of mosquito-born infection in malaria has been so clearly demonstrated, there are those who still cling to the idea that this fever is a result of "miasm." The damp vapor or small quantity of marsh gas or sulphuretted hydrogen which rises from a tropical marsh is absolutely unable to engender diseases like malaria and yellow fever. The discovery of the mosquito origin of fevers was not spontaneous, and for years many medical men were occupied in furthering experiments in that direction, but Doctor BAUPERTHUY, the father of the doctrine of insect-born diseases, makes the first reference to this theory somewhat remote when he argues that HERODOTUS, when he spoke of winged serpents, referred to the mosquito, whose poisonous bite might be compared in its effect on the human body to that of the serpent's bite. Not to HERODOTUS but to Dr. LOUIS DANIEL BAUPERTHUY



THE MALARIA MOSQUITO.

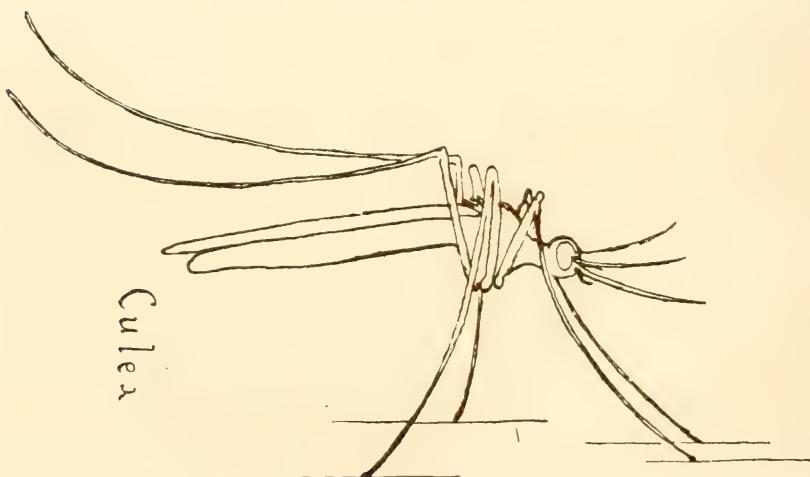
This species, scientifically known as *anopheles*, after having bitten a person whose blood contains the malarial fever germ, passes the spore of the disease on to the next person into whose skin it plunges its poison-laden proboscis. Notice the spotted wings which are characteristic of this variety.

himself belongs the honor of this epoch-making discovery, for perhaps never in the history of medicine has such a carefully thought-out prognostication received such remarkable scientific confirmation. It is difficult for us to realize how only recently the United States was subject to periodical visits of yellow fever, one authority stating that this



AN ACTIVE ANOPHELINE.

Here is the malaria mosquito about to attack. It carries its body at right angles to the point of rest, and is easily distinguished from other mosquitoes when seen in this attitude.



THE CULEX MOSQUITO.

One of the carriers of filaria, the worm that engenders "fever and ague" and "elephantiasis." The study of this insect led directly to the discovery of mosquito infection in malaria and yellow fever. It is curious to note that only the female is the carrier of these diseases.

dread disease had appeared with more or less virulence 112 times throughout the country between the years 1702 and 1878, but the labors of Maj. WALTER REED were not in vain and now the existence of a case of "yellow-jack" is practically unknown in the United States. And it is the same measures that were used to stamp out the plague in the United States, Cuba, and Panama that are now being put into effect throughout so many Latin-American countries, measures of protection from the mosquito. The author very rightly goes into great detail in describing the best methods of protection from this insect enemy, and the book should be read and its precepts followed by all who live exposed to the peril. An article on this same subject will appear shortly in the BULLETIN, which will detail the advance made along sanitary lines by the various Latin-American countries.

MEXICAN FOLK-LORE.

"Legends of the City of Mexico." By THOMAS A. JANVIER. Illustrated by WALTER APPLETON CLARK. New York, Harper & Bros., 1910, xviii (1), 164 (1) p. plates. Size 6 by 9 inches. Price \$1.30 net.

This is a charming collection of ghost and folk-lore stories illustrated with six spirited pictures by Mr. WALTER APPLETON CLARK, and several photographs showing the scenes of some of the tales. The author, Mr. THOMAS A. JANVIER, is a well-known collector of folk-lore stories, being a member of the Folk-Lore Society, London, and he is to be thanked for his addition to this type of tale. His main sources of information were a very wise and talkative old washer-woman, well acquainted with the legends and myths of Mexico, and one GILBERTO, a most superior class of waiter, very much interested in antiquarian investigations. GILBERTO heard many of the tales from his grandmother, and he recounts them with a preciseness of detail that lends an air of verity to the supernatural incidents related. The author is happy in choosing to tell the tales in the language of his informants, for in this manner he best preserves a picturesque phraseology that gives a delightful insight into the Mexican character. The description of the mulata de Córdoba is typical:

It is well known, Señor, that this mulata of Cordoba, being a very beautiful woman, was in close touch with the devil. She dwelt in Cordoba—the town not far from Veracruz, where coffee and very good mangoes are grown * * *. She led a very good life, helping every one who was in trouble and giving food to the hungry ones, and she dressed in modest clothes simply, and was always neat and clean. She was a very wicked witch—and beyond that nobody really knew anything about her at all.

Such delightful inconsistencies give these stories a peculiar charm which heightens their artistic rendering. As the action of most of the stories takes place in houses or streets still to be located in Mexico City they are especially interesting to the traveler, but all who care to read ghost tales and are interested in superstition stories will find this a most charming collection of them, delightfully told.

JEWELS.

“The Gem Cutter’s Craft.” By LEOPOLD CLAREMONT. London, GEORGE BELL & SONS, xv. 296 p., illus., plates. Size $7\frac{1}{2}$ by $9\frac{3}{4}$ inches. Price 15 shillings, net.

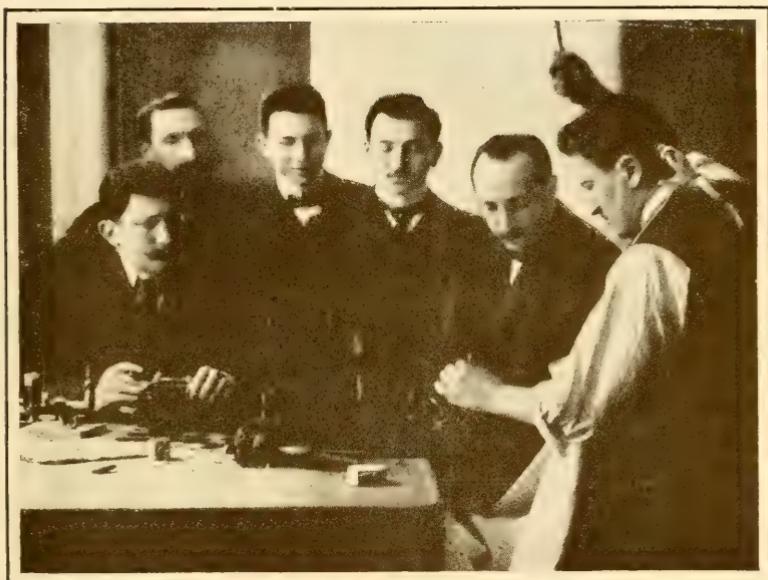


THE GREAT CULLINAN DIAMOND IN THE ROUGH.

On January 26, 1905, in the débris of the Premier mine, near Pretoria, South Africa, was found by chance the largest diamond in the world, weighing 3,026 carats, or over 1 pound and 6 ounces avoirdupois. It was named after Mr. Cullinan, president of the company operating the mine, and presented as a Christmas gift to Edward the Seventh, of England, by the Transvaal Government.

The subject of jewels is ever interesting, and this book, written by a practical gem cutter, takes us behind the scenes, as it were, in the drama of precious stones. He shows us the uncut specimens in all their roughness and then describes the process by which they are brought to their final state of perfection to charm the senses in glorious sparkling color. The book is crowded with interesting information, not the least of which is the conclusion reached from a study of gems under the Röntgen X rays by which it was shown that diamonds are

crystallized carbon. This fact, however, was known to the chemist long ago. Still its corroboration by the examination of the X rays is modern. Dame Fashion's stern mandates hold with the wearing of jewels, and the author seems to regret that this should be so. He consoles himself, however, with the knowledge that gems not worn to-day may be worn to-morrow and vice versa, for the first law of fashion is change. The supernatural qualities attributed to precious stones in ancient times might well surprise their wearers in modern days; to believe, for instance, that to hold a diamond in the mouth would cause the teeth to drop out, is impossible now, and we fear



CLEAVING THE GREAT CULLINAN DIAMOND.

This interesting event took place in Amsterdam, Holland, and was performed by the most skillful experts there, before three representatives of King Edward and the three members of the firm which undertook the work.

there are many owners of these beautiful stones who lack the qualities of magnanimity, virtue, and courage, attributes which the wearers of diamonds are supposed to possess. The curious belief that the amethyst will preserve its owner from the effects of drunkenness can be decided in these days if any student of the supposed influence of precious stones is sufficiently interested, and we think the turquoise is still given as a love token, but it is doubtful if the lovers know that this practice comes from the fact that in other days it was believed the hue of the stone varied with the constancy of the lover. The author devotes separate chapters to a consideration of all the principal precious stones, detailing many little known facts in a most

interesting manner, convincing the reader that he is getting first-hand information from an authoritative source. The book should be found in the library of every lover of jewels. In a new volume by



THE FINISHED DIAMONDS.

These are known as Cullinan II and Cullinan I, respectively, the former weighing 309 $\frac{1}{2}$ carats and the latter 516 $\frac{1}{2}$. The photographic reproduction shows the actual size of the finished stones.

the author will appear a number of illustrations that have been used in the articles published on emeralds, diamonds, and pearls in the **MONTHLY BULLETIN**.

MINING.

“Hydraulic Mining. Classification, Test and Valuation of Alluvials, Water Supply, Methods of Working Alluvials, etc., with Supplements on Roads for Mining Purposes and Motor Traction, and Appendix,” by C. C. Longridge, * * * London, “The Mining Journal,” 1910. xiv, 352, xv–xxii p. Size, 6 $\frac{1}{2}$ by 10 inches. Price 20 shillings, net.

This is an exhaustive study of alluvial mining in all its branches, a process of extracting the precious metal that always has been and always will be a popular one. The washers of gold long antedate miners of rock, and the simplicity and cheapness of the process is such that it fascinates all prospectors. The poor man with his pan, his rocker, or long tom, has a field here he might never aspire to in any other branch of mining.

The subject of hydraulics, as applied to mining, is treated technically, numerous valuable tables being supplied, and in addition is given the results of this technical knowledge as applied in actual experiment. This is indeed important, as it is impossible to eliminate the element of chance from this industry.

The author refers to gold found in the black sands of Patagonia and the Chilean coast, indicating a district of especial interest to our readers, and it might be suggested that the lessons learned in Alaska, as set forth in this book, could be profitably studied by prospectors looking toward Colombia.

WEST INDIAN TRAVEL.

“Sailing Sunny Seas.” A story of travel, by ELLA WHEELER WILCOX. Chicago, C. B. Conkey Company, 1909. 248 p. plates. Size 5 by 8 inches. *Price, \$1.50.*

This is a collection of travel tales, interspersed with verse, of voyages in West Indian seas and the Pacific, and the author, well known for her numerous volumes of poems, touches on many of the problems confronting the peoples of the countries she visited, but it is to be feared that she judged entirely from the Anglo-Saxon standpoint. Of the countries encountered in her travels, Haiti, the Dominican Republic, and Cuba are the ones of especial interest to readers of the *BULLETIN*. Her criticism of the American soldier in Cuba seems rather severe, for it is well known that upon the withdrawal of the American troops after the recent occupation the high Cuban officials and the population in general had nothing but words of praise for the departing army, and Major-General BARRY, U. S. Army, who commanded the army of occupation in Cuba, was highly complimented upon the uniformly good behavior of his forces during the two years they were stationed in this island. It would seem from the chapter on Cuba that the author had but a superficial knowledge of real conditions existing there. In writing of Haiti she lays unnecessary stress on the practice of voodooism among the lower classes. Unfortunately, this is a condition not confined to that country alone, for the rites of this barbarous worship are practiced to this day among the blacks in certain sections of our own country. Of the Dominican Republic the author writes more sympathetically, but we must repeat that no fair estimate of conditions in these islands is possible until one thoroughly understands the Latin-American point of view. Much of the book is a record of the trivial incidents of travel told in an interesting way.

MISCELLANEOUS NOTES.

Dr. LISANDRO ALVARADO, a well-known Venezuelan writer, has recently published a volume under the title of "*Historia de la Revolución Federal en Venezuela.*"

A Spanish translation of Señor QUESADA's article on the rights of Cuba to the Isle of Pines, contained in the November, 1909, North American Review, has been published in pamphlet form by RAMBLA and BOUZA, of Havana.

"*Martí: Norteamericanos,*" is the title of volume 8 of the collection of the works by the great Cuban patriot, which Señor GONZALO DE QUESADA, late Minister of Cuba in Washington, is publishing as a monument to the memory of MARTÍ.

The National Historical Museum of Buenos Aires has presented the Columbus Memorial Library with Volumes I and II of "*Memorias y Autobiografías,*" a most important work now being published by that institution, and devoted to the study of the life of notable men of all countries.

Dr. SANTIAGO I. DE BARBERENA, Director-General of Statistics of El Salvador, has just published No. 2 of his important work entitled "*Departmental Monographs.*" This pamphlet is devoted to the Department of Morazón, and contains geographical and statistical data of great value.

Señor GUALTERIO G. DAVIS, Chief of the National Meteorological Bureau of the Department of Agriculture of the Argentine Republic, has published a valuable work under the title of "*Clima de la República Argentina.*" The book contains numerous maps and important statistics on the subject.

The Columbus Memorial Library is in receipt of volume 3 of the work on "*Mineral Statistics of Chile in 1906-7,*" published by the National Mining Society of Santiago under the direction of Señor GUILLERMO YUNGE, a mining engineer. The volume is profusely illustrated with photographs, maps, and diagrams.

Among the last publications on jurisprudence received is No. 4 of the "*Revue Générale de Droit International Public,*" edited by M. PAUL FAUCHILLE, in Paris. A number of the "*Revue de Droit International Privé et le Droit Pénal International,*" founded by M. A. DARRAS and published by M. de LAPRADELLE, in Paris, has also been received.

The latest volume of the series of "*Unpublished or Very Rare Documents on Mexican History,*" edited by Señor GENARO GARCÍA,

is the one entitled "*La Intervención Francesa en México, según el Archivo del Mariscal Bazaine*" (The French Intervention in Mexico according to Marshal Bazaine's Archive). It is the twenty-seventh of the series.

The Uruguayan Minister in the United States, Señor Dr. LUIS MELIÁN LAFINUR, has presented the Columbus Memorial Library with an autograph copy of his book, "*El Problema Nacional y su Solución Inmediata*," published in Montevideo in 1905. The library has also been favored with another book by the same distinguished author, entitled "*Ecos del Pasado*," a collection of poems, published in 1909.

The first volume of the "*Historia Contemporánea de la Revolución Federal en Venezuela*," by Señor FRANCISCO GONZÁLEZ GUINAN, late Minister for Foreign Affairs of Venezuela, has just been published. The whole work, due to its extension and importance, will be divided into nine parts. The first part deals with the "Conquest," the "Colony," and the "Great Colombia;" the second period begins in 1830 and ends in 1847. The following volumes shall be devoted to the study of the political evolution of Venezuela from that period up to the administration of Dr. JUAN PABLO ROJAS PAULO.

The "*Revista de Derecho, Historia y Letras*" of Buenos Aires for the month of January, 1910, contains many interesting articles. The article on "The Progress of the United States," by Col. L. SABORIDO, of the Argentine marine service, is of especial note, as showing that the position of the United States in its commercial rivalry with Europe is understood and is viewed with an appreciative interest by the Republics of South America. Other articles of special interest in the number are "Parliamentary Government" by S. ALEJANDRO GANADO, "The Argentine-Paraguay Annual Sanitary Convention, by S. P. DE LA C. MENDOZA, "Foreigners before the Chilean Law," by S. AUGUSTIN CORREA BRAVO, and "Steam Navigation in our Rivers," by S. A. CARDOZA. The "*Revista*," now in its twelfth year, was founded and is edited by Dr. ESTANISLAO S. ZEBALLOS, former Minister of Foreign Relations of Argentina.



WHAT IS IN THE MAGAZINES

“Our South American Trade” is the title of an article by Prof. WILLIAM R. SHEPHERD appearing in the “Political Science Quarterly” that contains so much information of value to the American merchant who seeks new fields of trade in Latin-American countries that we quote from it in extenso:

* * * It needs but a glance at statistics to show that the main currents of South American trade flow east and west, to and from Europe, and not to and from the United States. While the total commerce of the several countries of the southern continent exceeds \$1,300,000,000 a year, the share of the United States in that commerce is less than one-sixth. Our exports to South America fall short of our imports by upward of \$70,000,000, and constitute only about 4½ per cent of our total exports. For the existence of this trend of traffic adverse to us the circumstances of geographical position, habits of association, and the nature of many of the commodities exported from that continent are all responsible. The countries extending along the east coast face Europe and lie practically as near to it as to the United States. Advantages of location, strengthened by favorable conditions of climate and soil, have made their relations with the Old World very close. The Republics on the Pacific side of the continent are also quite as near to Europe as to the United States. Shut off in great measure by the wall of the Andes and prevented by other obstacles from attaining so rapid a development as the States to the eastward, they have come to be even more dependent upon their European connections. Nor has the communication recently established between Asia and the west coast of South America by means of a Japanese line of steamships led as yet to any marked change in the customary eastward direction of the west coast trade. Even in the case of the two northern Republics, Colombia and Venezuela, which lie nearer to the United States than to Europe, the commercial advantages thus afforded us have been largely offset, as we shall see, by the operation of other forces. Furthermore, it should be remembered that the Population of the several Republics has been greatly increased by immigration from Europe. Familiar with the products of their native lands, the newcomers naturally prefer such products to articles brought from other countries and maintain a constant demand for them, unless powerful inducements to the contrary are made effective. The South American States, finally, export great quantities of mining and agricultural products similar to those which form the chief elements in our own export trade. Since these products find in Europe the ready market which they can not possibly secure in the United States, it follows, as a foregone conclusion, that where the goods are sold corresponding purchases will be made. * * *

We fear that Professor SHEPHERD is quoting the maximum when he puts the load that can be carried by an ox used in transporting goods in the mountains at 400 pounds and the load of a mule at 250 pounds. A llama should never carry more than 100 pounds.

In reference to the customs regulations the author says:

Turning now to a description of the customs regulations, it should be said that the duties levied in South American ports are more commonly specific than ad valorem, the weight being determined strictly in accordance with the metric system. The tariff schedules themselves are often complicated and, unless followed very carefully, may cause articles to be taxed much higher than the class to which they properly

belong. Special duties or surtaxes are levied at times on certain commodities, even though such duties may not be mentioned in the schedules directly under the technical headings of the goods in question. Some classes of merchandise, like oil and its products, lumber, machinery, construction material, and agricultural implements, which are imported regularly and in large quantities, are not so subject as other goods to delays and hazards at the port of entry. Besides the import duties as such, there are certain other charges to be met, as, for example, port, dock, and warehouse dues, the cost of cartage and fees for chemical analyses. Each of these naturally has to be considered with reference to the regulations prevailing in the State concerned. Still, after the entire expense of bringing the goods into the country is figured up, the total is rarely excessive.

As to our competitors in this field the following is pertinent:

* * * It is well known that the chief competitors of the United States are Germany and Great Britain. These countries opened their markets in that part of the world at a time when we were devoting our energies to the development of the enormous resources of our own land, and later they spread those markets industriously while we were busied in promoting our trade with Europe and Asia, * * *

As one of the contributing causes of the failure of American merchants to exploit their goods in Latin America, lack of interest in the information furnished from official sources was perhaps the most unnecessary. In this regard the author says:

Despite the fact that the sources of information on South American trade conditions are more ample in the United States than in the countries of any of our European competitors, they are frequently ignored. Reports and compilations of consuls and special agents are sent out in abundant quantities by the National Government only to be thrown aside. A like treatment befalls the material offered by the International Bureau of the American Republics at Washington. Our average business man rarely glances at the monthly bulletins issued by that office and seldom avails himself of the information which it supplies. Whether the Division of Latin-American Affairs recently established in the Department of State will fare any better than the official agencies already existing remains to be seen. It is very difficult, furthermore, to induce American clerks and salesmen to accept positions in South America. While a young German or Englishman of fair ability is willing to go there for a salary of \$1,000 a year, a young American who is similarly qualified would demand double that sum, so great are the advantages offered at home or in some other part of the world where our trade may be flourishing. For this reason American firms doing business in South America are often forced to secure employees of German or of English birth.

Unfortunately, although it is the constant aim of the Bureau to distribute all available information in reference to Latin-American matters, many erroneous ideas are still prevalent concerning these countries. Professor SHEPHERD details three of the most glaring:

The first of these notions is that the inhabitants of South America are scarcely half civilized. Not infrequently the American capitalist declines to invest his money in South American enterprises because he believes that it will not be protected. If as a nation we knew more about that continent and its peoples, the injustice of such an attitude of mind would be apparent enough. * * *

The second false notion is that the American way of doing business is necessarily the best in the world. Self-complacency and a sort of careless, good-humored condescension toward our European competitors have been converted, it would seem, by a decade or two of brilliant commercial success, into something approaching a national

obsession. In common with this spirit are the ideas, first, that if the South Americans want our goods they should simply send for them; and, second, that anything will do for South America. Both ideas are responsible for much of the prejudice existing in that continent against the use of our products. If orders are received from South America, the American manufacturer too often ignores them or ships something not desired. He may not dispatch goods which he knows to be inferior, as has been charged against him, but not infrequently he is slow about filling orders and careless or indifferent about returning articles, especially parts of machinery, sent to him for repair or replacement. The result of such a procedure is that no more orders will be received from the South American merchant so treated, although there may be a good market for the commodities in question.

Granting, however, that the American exporter does heed the orders that come to him, certain further defects in our trade with South America now come into view. They appear in two main forms. One of these is the unwillingness of the American manufacturer to alter what may meet the needs of his customers at home in such a manner as to satisfy the requirements of the South American purchaser. The other is his failure to safeguard his consignments against injury in transit. A recital of the defects themselves must involve a retelling of the old story of unintelligent packing; but like many other old stories, it may serve a good purpose by repetition. Not "once upon a time," therefore, but on numerous occasions, be it said, goods sent from the United States have been packed in shapes, sizes, and measures, and in weights and quantities unusual in South America. Pounds, quarts, and yards have no place in countries where the metric system prevails. Too frequently does it happen that the American exporter takes out an insufficient amount of insurance on his goods. He does not mark the articles shipped as carefully as he should. The indications as to form, size, contents, and the like are apt to be omitted from the labels or erroneously stated or wrongly placed, and the actual addresses of the consignees incorrectly given or so poorly put on as to become obliterated before the goods arrive at their destination.

The author concludes his article with a number of suggestions that are extremely important. He refers to the two types of traveling salesmen usually sent to Latin-American countries by American firms seeking to do business with those countries. In this regard we should say that our merchants should try to send men who are to seek trade with Spanish-American peoples that have an appreciation of the Latin point of view. They must have a knowledge of the language and they must be tactful and polite. It is all very well for the business man of the United States to contend that his short, brusque letters are all that is necessary and the correct way of doing business; nevertheless in dealing with people who are innately courteous one is likely to wound them, or they may take a curt letter as a possible personal affront, simply because they have learned their business methods in a more polite school. Other suggestions that Professor SHEPHERD puts forth that every American merchant should take to heart are that we should profit by the example of our European rivals. To do this three things are necessary:

First, is to get a first-hand acquaintance with South American conditions. Second, is to make a careful examination of the examples set by our European competitors in the conviction that we shall be able to improve vastly upon these models. Third, is to modify certain of our business methods so as to render them thoroughly effective in South America.

In the same line Professor SHEPHERD says:

Let members of our exporting firms visit the South American countries and observe for themselves the conditions existing there.

In conjunction with what is furnished by Europe, more of our capital should be invested in South America.

American banks should be established in South American towns.

American business men should treat their South American customers with as much regard as they do those at home. Goods should be shipped in the form and sizes requested by the customer. Packers thoroughly familiar with conditions of climate and transportation should be employed.

The American exporter should keep himself thoroughly well posted on changes in the tariff system.

Liberal concessions in the periods of payments should be allowed.

Advertising in the local newspapers and magazines should be resorted to.

Competent salesmen should make personal solicitation for trade.

Above all, American merchants should have in every field of their activities in South America a complete assortment of samples.

In "Recreation" several articles on "Through Little Known Chiapas" have recently appeared, being concluded in the January



Courtesy of "Recreation."

INDIAN WOMEN OF CHIAPAS, MEXICO.

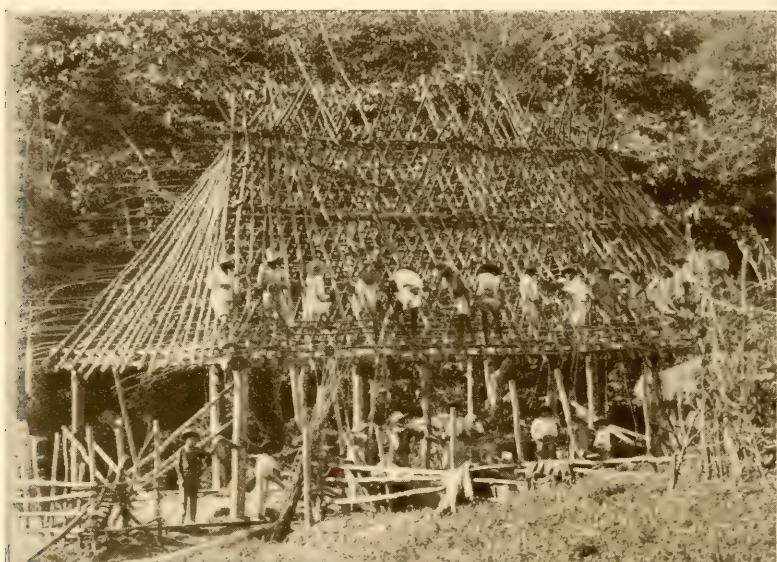
In rural Chiapas the women wear a distinctive costume that is both picturesque and becoming. The fluted headdress is its most ornamental feature.

number. The authors, Messrs D. W. and A. S. IDDINGS, credit this State in the Republic of Mexico with being the cradle of America, and give an interesting description of the legendary history of old settlements there. The name Chiapa signifies the locality of the Chia,

or oil seed. The State is one of the southermost of Mexico, adjoining Guatemala, and it is from the hieroglyphically recorded native history of the country, found and preserved by the Spanish conquistadores and other contemporary historians, that the basis of the belief that this country was the cradle of America has its origin:

IMOX was the first settler in the western world, and he located in this vale of the Usumacinta. He was the son of BELO, who was the son of NIMROD, the mighty hunter, who was the son of CHUS, who was the grandson of CHAN, the Serpent, and he came from the land of Valum Chivum in Eastern Asia. America then lay a vast wilderness, unpeopled and primeval, undoubtedly swarming with the fiercest of wild animals of a multiplicity of species.

The authors then tell how IMOX was joined by his brother and some companions, these being the progenitors of the American peoples. Although it is thought that the first settlers had what might have been considered in those days the benefits of civilization, their descendants undoubtedly degenerated into the wild state, in which



Courtesy of "Recreation."

A HOUSE WITHOUT A NAIL.

Most of the houses in the "hot lands" of Mexico are built of native woods and bamboo and roofed with palm leaves. Not a nail enters into their construction.

condition they were discovered by VOTAN, who is supposed to have landed in 955 B. C. Of this remarkable discoverer the article says:

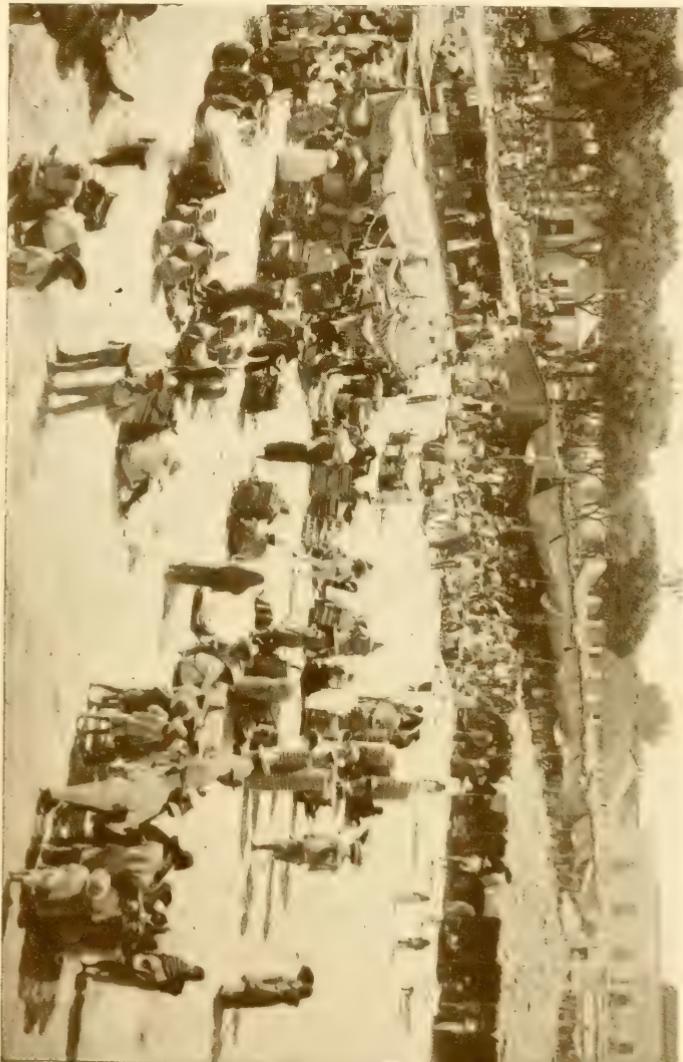
VOTAN was a descendant of NOAH, of ark fame, and had assisted in the building of the Tower of Babel. After the confusion of tongues there he headed a company of 7 families of the dispersed peoples upon a voyage to America, the land of the traditional settlement and colonization of his ancestors. He and his followers came by sea from the East, from the same Valum Chivum of IMOX and IGH by way of Valum Votan. They arrived in large ships and were white-bearded men, clad in long, flowing robes,

and the name "Tzequiles" was given them by the preceding colonists, meaning men with petticoats. * * * VOTAN built a great city almost where he had landed and called it NACHAN, the City of Serpents, after the great common ancestor of himself and his people, CHAN, the Serpent. By his teachings and by the aid of his companions he soon won back from their rude savagery the debased descendants of the early colonists from his own land. * * * He became the first Emperor of Zibalba, and,

(Courtesy of "Recreation.")

THE MARKET PLACE IN CHIAPAS, MEXICO.

"Chiapa de Corzo" is situated in the heart of the "hot lands" of Mexico, and in this market place the Indians in their picturesque costumes gather for barter and trade. The principal native products are gourd vessels and ingeniously constructed and brightly painted toys.



notwithstanding his manifold duties in this capacity, found time during his reign to make four visits to his original home in the Old World, on which occasion he witnessed the building of the Temple of King SOLOMON and beheld the ruins of the Tower of Babel.

The article goes on to give the history of this Kingdom of Zibalba, as well as the Kingdom of Maya, in Yucatan, founded by ZAMNA,



Courtesy of "Recreation."

LANDING A TARPON.

The sportsman who has not "killed his tarpon" has still a thrilling experience in store. The best fishing grounds are in the vicinity of Tampico, Mexico, and March is the best month for making the trip, although the season lasts from November until June.

having as its capital city Mayapan, and Chiquimula, which was another great kingdom at this time. The authors state that tennis was the national and international game at that period, and they say it is recorded that all disputes were settled on the quadrilateral courts. A vivid description is given of the set of doubles played by the two reigning brothers of the Kingdom of Chiquimula, named HUNALPU and XBLANQUE, against the Kings of Zibalba, HUN CAME and VUKUB CAME, in which the players from Chiquimula were victorious, the victory entitling them to the right of the dynasty of Zibalba. After this interesting account of the early history of the country the authors visited, they present a record of their journey, telling of their numerous adventures, detailing information in reference to the different cities they stopped at, the resources, and matters of general interest.

In "Tampico, the Town of Tarpon," appearing in the same magazine, Mr. H. M. DWYER describes the fascinations of this most exciting sport and tells just how the uninitiated can arrive at these happy fishing grounds in order to enjoy it.

“Moody’s Magazine” for January continues a series of articles entitled “The Truth About Mexico,” written by Mr. ELISHA HOLLINGSWORTH TOLBERT, taking up as the special subject in this number certain criticisms made on the treatment of the Yaqui Indians by the Government. It seems strange that a government system that has brought a country from the chaos of mal-administration to the order of peace and prosperity should need defense, but nowadays no individual nor country is safe from the shaft of the muck raker. If it shall be the lot of these writers to be translated to Paradise—a remote possibility—we are confident that they will find much to criticise in the conduct of affairs in the Heavenly Kingdom. Mr. TOLBERT takes up the sensational charges of mal-treatment of the Yaqui Indians *seriatim* and finds that they are rank fiction. We in the United States have had expert testimony on the Indian question from such an authoritative source as General SHERMAN, and while there are those who consider the judgment of this famous soldier a bit severe, still it is a fact that certain races must give way before others in the march of civilization, and while such evolution is sometimes accompanied by regrettable incidents the progress of the world demands that this be so. Most of the criticisms of conditions in our sister Republic are unfair and unjust, and as a rule where there is any basis for the accusation they are found in isolated incidents that are in no way to be taken as indicating the existing state of affairs.

Apropos of the same subject, we quote the following paragraph from “The Editorial Review” for January, being a reprint of an article taken from the “Boston Advertiser”:

There is sound faith in Mexico in the DIAZ strength. The words of DAVID E. THOMPSON, who has just resigned the American Ambassadorship to Mexico in order to attend to his newly acquired railroad interests, have been generally quoted in lavish praise of DIAZ and his policies. The inspiration of so favorable a view is apparent, under the circumstances, but it is of weight as attesting the firmness of the faith placed by a shrewd business man in DIAZ and his works. It is the prevailing fashion in some quarters to attack DIAZ and his administration, but the American public should not be too easily convinced by *ex parte* statements of the situation regarding problems upon which information is scant. There is no successful disputing the fact of DIAZ’s great work of construction.

We offer our sincerest congratulations to the Dorrance Company, 2 Rector street, New York, on the appearance of the first number of their publication “Foreign Trade” (*Comercio Extranjero*) printed in Spanish. The thought and care taken in the compilation of this magazine are amply attested by the result achieved. It is an excellent commercial publication and one that is bound to have an extensive and direct influence on the furthering of American trade

among Spanish-speaking peoples. It appears at a time when, as we know from our own correspondence, the interest in Latin-American affairs in the United States is at high-water mark, and with the instructive articles and attractive illustrations that fill its pages, is a real educational medium both for the merchants of the United States and of our Latin-American neighbors.

"Improvement of Pan-American Shipping Facilities" is the title of an article appearing in the February number of "American Industries" by Mr. JOHN BARRETT, the Director of the Bureau of the American Republics. Mr. BARRETT writes with authority on this subject, and he makes a point of the necessity of improving communication between the United States and Latin-American countries by the establishment of new steamship lines, but does not think it necessary that ships engaged in this trade should fly the United States flag. He says:

If to-morrow a Brazilian, a Chilean, an Argentine, or even an English or a German company would guarantee to provide weekly steamers of 12,000 tons, running 17 knots, and having first-class passenger accommodations, I would vote, if I had the ballot to cast, in favor of giving a company that would provide this class of boats a sufficient wage or payment so that it could afford to run them. Already there are a number of very good steamers running from New York City to Rio de Janeiro, Montevideo, and Buenos Aires, and they deserve to be encouraged by American travelers, and even by the American Government in the matter of suitable compensation for carrying the mails. We need, however, faster boats than there are now, but these can only be obtained by the United States Government paying a price that will enable the companies to put on faster vessels.

Mr. BARRETT puts himself on record as being against what is commonly known as "subsidy," but believes that ships carrying United States mail and flying the United States flag should receive greater financial recognition.

In referring to the conditions in Argentina, the author says:

When I was United States minister to the Argentine Republic I was chagrined to see more Argentine business men, buyers, sellers, travelers, and tourists going to Europe in one week on the fast European steamers than went to the United States in a whole year on the slower boats running to New York. Correspondingly, I was handicapped in my efforts to build up American commerce and prestige by noting that answers to letters written by Argentine purchasers to the exporters and merchants of Europe were received two and three weeks sooner than answers to similar letters written to the exporters and manufacturers of the United States.

In summing up this question, Mr. BARRETT states:

Great trade relations can not be conducted with poor mail facilities. It is just as impossible to build up a commerce on the seas by slow-going freight vessels as it would be to build up commerce on land with slow freight trains. We must have fast express and passenger steamers on the seas just as we have fast express and passenger trains on land; otherwise the mails and passengers would never get between two points any quicker than heavy freight now makes the distance.

“The Exporters and Importers’ Journal” of January 22 contains an excellent article on “Industrial Mexico” by C. F. MASON, in which he tells of the commercial activities of the different States. The products of each section, whether mineral or agricultural, are specified and figures of imports and exports furnished. “Trade of the West Coast of South America” is also a subject that is of timely interest to readers of the BULLETIN, giving, as it does, in brief form, present commercial conditions of the South American Republics bordering on the Pacific coast. A knowledge of these conditions will help American merchants to arrive at a conclusion as to the importance of this market, with which we will be brought in closer touch with the completion of the Panama Canal. The author makes the statement that Quito, the capital of Ecuador, is the highest city in the world. We can not understand how he has been led into this error, for there are numerous cities in South America that are higher than Quito. At random we might mention La Paz, the capital of Bolivia, which is situated at an altitude of 12,500 feet, and Oruro, another town in the same State, more than 12,000 feet above the level of the sea, while the altitude of Quito is but 9,350 feet. In this same journal is a short article telling of the works of the harbor of Rio Grande do Sul. This is the subject of a story in this number of the BULLETIN.

“Panama and the Panamans” is the title of an article by Mr. FORBES LINDSAY appearing in “The Travel Magazine” for February, and as Mr. LINDSAY is an authority, anything he writes on this subject merits attention. What he says of the apparent lack of interest on the part of our fellow-countrymen in things Panamanian is, unfortunately, true.

Of the thousands of Americans who each winter seek change of scene and climate in the West Indies, only the smallest proportion visit the Isthmus of Panama, although it might easily be included in their itinerary. No doubt this neglect is, in the main, due to a misconception of conditions. Our people have not yet realized that the Canal Zone is as healthy as Cuba or the Bermudas, and its climate during the first four months of the year equally as pleasant. In point of interest Panama should have unrivaled attraction for the American tourist. The United States has territorial possession there and is there engaged in the greatest material enterprise in the history of the world. The country abounds in buildings, ruins, and sites associated with the romantic story of its rise and decline under Spain. And in this novel and distinctly foreign environment the American traveler finds himself among his countrymen and under the influence of American institutions. In short, Panama affords a combination of conditions conducive to enjoyment that no other winter resort can claim.

The author continues with a description of the cities of Colon and Panama, touching on the historically interesting ruins that are found

in the vicinity and writing sympathetically of the character of the natives, ending with this paragraph:

Conditions are now entirely different. Personal and property rights are as sacred as in the United States. The National treasury is well filled and its contents are wisely applied to public improvements. The Government projects extensive road building in the outlying provinces and one or two railroad propositions are under consideration. Panama is on the eve of a development such as Porto Rico is undergoing with American assistance.



Courtesy of The Travel Magazine.

SUNSET ON PANAMA BAY.

View across the bay from La Boca (now called Balboa), the Pacific outlet of the Panama Canal.

In the same magazine Mr. RICHARD BARRY, writing of "Cuba, a Winter Paradise and Playground," tells of a journey in the Vuelto Abajo tobacco district and a visit to a sugar refinery. Unfortunately, Mr. BARRY's facetious style might lead the unlearned in conditions in Cuba into error, and his statement that the superiority of the soil of Vuelto Abajo is due to the fact that each year on Easter Sunday the ground is anointed by the blood of a fighting cock, might unintentionally lead the credulous into a wrong impression. It is not within the province of the BULLETIN to discuss the political situation of the Latin-American Republics, but it is necessary that

notice should be taken of inaccurate statements in these matters, and the article mentioned shows that the author has been misinformed on this matter. Again, Mr. BARRY exaggerates the danger from disaffected employees on the sugar plantations and his statement that the sugar guards are almost as numerous as the workers is entirely incorrect. Since the organization of the *Guardia Rural*, a mounted police force trained under the supervision of American army officers, a force that has been most efficacious in suppressing disorder of every kind, the danger that any plantation will be set on fire by some disgruntled workman has been greatly lessened. Mr. BARRY concludes with a reference to the attractions of Havana and the excellent motor roads on the island.

The "Inca Chronicle" merits the adjective "breezy," and as it is published at La Fundicion, Peru, at an altitude of 14,300 feet, such qualification may not be altogether unappropriate. It contains a number of interesting articles on the Andes and on conditions in that country from men on the ground. The employees of the Cerro de Pasco mine ought to be congratulated on their enterprise, for the Christmas number of their publication is a success, both in the illustration and in the reading matter. However, in kindly criticism, which our older experience in Latin-American affairs justifies, we should suggest that humor based on misinformation which local readers might appreciate perhaps would tend to create wrong ideas in other countries. The editor of the periodical that is published at a higher altitude than any other English paper in the world should be in a position to see the possible effects of his printed paragraphs.

Rear-Admiral ROBLEY D. EVANS, in the February number of "Hampton's Magazine," sets forth his reasons "Why the Panama Canal may be a Bad Business Venture," and shows how, in his opinion, it may be necessary to throw the canal open to the world free of charge. It would seem, however, from a study of his article, that he has given us some very strong arguments for the creation of an American merchant marine:

The sum paid by American producers and manufacturers to these foreign bottoms for carrying their wares to market during the past year was, in round numbers, \$500,000,000, a sum sufficient to dig the Panama Canal and operate it for twenty years. Or, for the same sum of money, we could have built and commissioned 50 battle ships of the latest type. Remember that *all this good American money has gone into the pockets of foreigners*, and a similar sum will go the same way every year, without benefit to our people beyond carrying their products to market, unless we can relieve them of the high rates of transportation. This we can do only by shortening the

haul—in other words, using the canal when it is completed—or sending our goods in our own ships, and thus letting the money now paid to foreign carriers remain in this country for those who care to follow the sea as their business.

In the same magazine is an appreciation of Mr. DAVID EUGENE THOMPSON, President of the Pan-American Railroad, who has recently taken up the work of this great intercontinental project.

In "The Bankers' Magazine" for January Mr. R. S. CAUVIN begins a series of articles entitled "A Mexican Travelogue," which contains numerous illustrations. There is also reference to President TAFT's attitude toward Latin America, as shown in his recent message, a statement of the possible effect on Great Britain of the so-called American "invasion" of the Argentine meat trade, and short references to the National Railways of Mexico, the growth of the International Bureau of American Republics, and a picture and appreciation of Mr. T. R. CRUMP, President of the Federal Banking Company, Mexico City.

In the February number of this magazine, under the Latin American notes, will be found the following articles of interest: "A Mexican Travelogue—Part II," "Governing Board of the International Bureau of American Republics," "Investments in Nicaragua," "Banking Institutions of Paraguay," and "Mexican Notes."

"The Scottish Geographical Magazine," of Edinburgh, in the January number, contains an article on the "Regional Population Groups of Atacama," by ISIAH BOWMAN, Assistant Professor of Geography at Yale University. This article appeared previously in the Bulletin of the American Geographical Society.

The same magazine contains a reference to the Trans-Andean tunnel, a description of which appeared in the February number of the BULLETIN.

In "The Spice Mill" for January there is contained some timely information in regard to the coffee crop.

"The American Fertilizer" describes the present condition of the Chilean nitrate industry in an instructive article.

In the "American Exporter" for January there is an excellent short article on Costa Rica by Mr. FRANKLIN JOHNSON.

"The Mining World" of January 8, contains a description of the iron deposits at San Carlos, Mexico, by C. F. Z. CARACRISTI.

"The India Rubber World" for January contains an excellent article on the Guayule rubber situation by Mr. FRANCIS E. LLOYD.

“The Outlook” for January 29 contains a tribute to the late Senhor JOAQUIM NABUCO, former Ambassador from Brazil to the United States.

In “The Tea and Coffee Trade Journal” for January are two interesting articles, “The Coffee Trade of the World,” by JOHN J. MCFARLANE, and “The Nicaraguan Crop.”

In “The Economist,” of London, appears a series of articles on “The Railways of Argentina,” the subject of the present number being “The Argentina North Eastern Railway.”

The “Mining and Scientific Press” of December 25, contains special correspondence on the different mines in Mexico, and the “Los Angeles Mining Review” contains an article dealing with the same subject.

The midwinter number of “The Century” contains a very clever, well-written story by Mr. L. FRANK TOOKER, entitled “The Lady and the Earthquake,” the action passing in a little town that lies in the shadow of the Peruvian mountains.

In “The Bulletin of American Institute of Mining Engineers” for January, Mr. ALBERT F. J. BORDEAUX briefly describes the general outline of cyaniding silver ores in Mexico and gives a special record of his personal experience in Temascaltepec district.

“Cyaniding Silver Ore in Honduras,” by Mr. GEO. E. DRISCOLL, which appears in “The Mining Journal” of January 22, describes the process by which the New York and Honduras Rosario Mining Company has recently changed the ore treatment at their mine in San Juancito, Honduras.

“Mexico Judged By Its Friends,” an article appearing in “The Independent,” of January 20, by Mr. W. H. GHENT, gives a résumé of what has been recently published in regard to the situation in Mexico. Mr. GHENT quotes extensively from all that has been written on this subject.

“The Business Operations of the Consular Service,” by Mr. G. M. JACOBS, is a very instructive article appearing in “The Bookkeeper,” for February, showing, as it does, how our consular officers throughout the different cities of the world make use of the most modern appliances to further their work.

In the “Bankers and Investors’ Magazine” for January is an article on “Credits in Latin America” by ISAAC MANNING, United States Consul at La Guaira, Venezuela. This article is taken from a United States Consular and Trade Report, to which a reference has already been made in the BULLETIN.

In an article entitled “Northwestern Mexico Developing,” appearing in the January issue of “The World’s Events,” the prophecy is

put forth as to the possible development of a hitherto neglected area by reason of the two new railroads that will bring the products of this country to the markets of America.

The January number of "The Engineering and Mining Journal" contains extensive résumés of the mineral situation in the principal Latin American countries. There is a long article by Mr. J. AGUIRRE-ACHA, Consul-General of Bolivia in New York, describing general conditions in Bolivia and giving special data concerning the principal mining companies in that Republic.

"The Mexican Mining Journal" for January contains a short article on conditions and cost of mining at the Braden Copper Mines, Chile, by Mr. Wm. BRADEN. The author sets forth difficulties to be met with in mining on the west coast countries of South America and gives his suggestions for successfully overcoming these difficulties. The suggestions are in a general way applicable to all mining operations in that district.

"The Mexico Financier" of December 25, gives statistics concerning the cotton mills of Mexico. The following statement seems to be of special interest:

The statistics of the cotton manufacturing industry of Mexico for the fiscal year ending June 30, 1908, according to the government returns, are as follows:

Cotton mills.....	number.....	145
Active spindles.....	do.....	732,876
Active looms.....	do.....	24,997
Printing machines.....	do.....	42
Operatives.....	do.....	35,816
Cotton consumed.....	pounds.....	79,454,394
Pieces cloth produced.....	each 27 meters long.....	5,336,512
Yarn sold.....	pounds.....	16,680,843
Mill sales.....		\$54,714,226

It is seen that the consumption of cotton per spindle in 1908 was 108.4 pounds.

In "The American Review of Tropical Agriculture" for January there is an able editorial on "The Conservation Movement," which quotes from a speech by Mr. GIFFORD PINCHOT at a dinner given by the University Club of Mexico City in his honor. Mr. JOHN L. KIRKWOOD writes authoritatively on the propagation of guayule by seeds, giving the results of investigations by the Continental Mexican Rubber Company for the purpose, mainly, of determining the feasibility of propagating the plant and of solving the problems of this nature with which they were largely concerned in the manufacturing operations. Examination was made of seeds from a number of sources in widely separated fields, as well as from plants under cultivation. Mr. KIRKWOOD goes on to describe the process of the examination and gives the results of the test to discover the potentialities of these seeds.

LATIN-AMERICAN NOTES

During 1909 Mexico built 281 miles of railway lines.

An International Rubber Exhibition will be held in London in 1911.

At the close of 1909, 71 sugar mills were in operation in the Island of Cuba.

A new textile factory is being established at Lavras, in the State of Minas Geraes, Brazil.

The Laguna cotton crop at Torreon, Mexico, is estimated to be worth \$15,000,000.

German bankers are said to have subscribed the new Bolivian loan of £1,500,000.

The reigning Prince of Schaumburg-Lippe, Germany, has purchased a large estate in Argentina.

At the beginning of 1909 there were 4,756 miles of telegraph lines in Venezuela, and 169 telegraph offices.

A French wine expert has formed a company in Mexico for making wine from the maguey plant.

The area of the city of Buenos Aires is 186 square kilometers, while that of Paris is only 78, and that of Berlin 65.5.

Large deposits of amethysts have been discovered in the Chalcolna mountains, a spur of the Andean range, in Chile.

During the Centenary celebrations in Buenos Aires, the ladies of Chili will present the Argentine navy with a banner.

The Government of Colombia has appointed Sr. PEDRO ANTONIO PAVON, consul of Colombia at Tulcan, Ecuador.

Half a million visitors are expected to attend the centennial celebration to be held in the City of Mexico in September, 1910.

The next International Sanitary Conference will be held in Santiago de Chile in 1911, with Doctor MÁXIMO CIENFUEGOS as President.

The Illinois Central and Big Four railroads are operating a through package car to Knights Key, Fla., for shipments to Havana, Cuba.

The Brazilian Congress has had under consideration the passage of bill providing for the electrification of a part of the Central Railway.

Sr. GUILLERMO PEREZ VALDIVIESO has been appointed by the Chilean Government a delegate to the Postal Conference in Montevideo.

The Republic of Panama celebrated on January 21 last the two hundred and thirty-seventh anniversary of the founding of the city of Panama.

The Berlin banks have recently sent to Buenos Aires 5,000,000 marks in gold in settlement of corn shipments from the Argentine Republic.

The President of Cuba has approved the regulations governing the relations between the Cuban Red Cross and the national navy in time of war.

An automatic telephone system has been installed in Havana, and The American Motor Company has inaugurated a taxicab service in the same city.

A concession has been granted authorizing the establishment of a coastwise cable service from the mouth of the Amazon to the southernmost point of Brazil.

On January 9 of the present year the organization known as the "Sociedad de Amigos del País" held its one hundred and seventeenth anniversary in Havana.

A new soap factory has been established at Comayaguela, Honduras. The factory will use only the best material, and will turn out an excellent quality of soap.

The governor of the State of Alagoas in Brazil has contracted for the establishment of an automobile service between Maceio and Penedo and intermediate cities.

The customs receipts of Uruguay aggregated \$1,156,322 gold, for October, 1909, an increase of \$108,701 as compared with those of the same month of the previous year.

Three stakes of the value of \$100,000 will be decided at Buenos Aires during the present year. These prizes have awakened considerable interest in racing circles.

Sr. MARIANO BENLLIURE, a noted Spanish sculptor, has been commissioned by the Government of Peru to make a statue of General JOSÉ DE SAN MARTÍN, to be erected in Lima.

The Royal University of Turin, Italy, will admit students of the Argentine University of Buenos Aires, who have attained the degree of bachelor, without requiring an examination.

The Government of Honduras has contracted with Mr. ALFRED D. SCHOCH to teach English in the National Institute, and School of Commerce, of Tegucigalpa, the capital of the Republic.

In January of the present year the Circle of Fine Arts in Montevideo, Uruguay, held an art exhibition in the Pavilion of Hygiene at the Urbano Park in the capital of the Republic of Uruguay.

Steps have been taken to secure the historic boat and cannon used by Gen. ANTONIO MACEO of Cuba in his campaigns against the Spaniards. They will be placed in the National Armory at Havana.

The Argentine Bureau of Hydraulic Works has been authorized to purchase six marine boilers in Europe at a cost of about £7,307. The purchase will be made through the Argentine Legation in London.



From *La Ilustración Sud Americana*.

SCENES IN CONNECTION WITH THE SIGNING OF THE PROTOCOL BETWEEN ARGENTINA AND URUGUAY.

The protocol was signed in Montevideo on January 5, 1910, the principal question at issue being the navigation and use of the waters of the River Plate. A number of fêtes were given in honor of the event. In the upper picture is shown the envoys toasting the successful conclusion of the protocol at an official reception given at the Governor's house. In the center is the President of Uruguay, Dr. Claudio Williman; to his right, is Dr. Blas Vidal, Secretary of the Treasury of Uruguay, and to his left Dr. Roque Saenz Peña, the Argentine envoy. The lower picture represents a scene at the race course during the running of the Grand International at Montevideo on January 6. The President is seated in the center, with the Brazilian Minister to Uruguay on his right and Dr. Roque Saenz Peña on his left.



THE NORTH AMERICAN COWBOY IN ARGENTINA.

This picture, reproduced from *La Ilustración Sud-Americana*, depicts an exhibition in lassoing by one of a troop of North American cowboys who are successfully exhibiting their prowess throughout Argentina. In the background are seated a number of admiring "gauchos," or cowboys, of the Argentine pampas.

The building of the Madeira-Mamore Railway in Brazil is being pushed rapidly. The English steamer *Oteria* from Para arrived at Itacoatiara, having on board more than 300 laborers of different nationalities.

Herr DONER, a German expert in the management of the State railways of Germany, has contracted with the Republic of Chile to take over the management of the State railways there for a period of three years.

The two battle ships now being built in the United States for the Argentine Government will carry to Buenos Aires 8,000 tons of steel plates made in Pittsburg, as well as other materials manufactured by Pittsburg mills.

The Cuban House of Representatives has passed a bill allowing for a further extension of five years for the cancellation of the national "censos," or unlimited mortgages, recommended by the President in his message to Congress.

Mr. GONZALEZ, a silk expert at Monterey, Mexico, is advocating the establishment of silk culture in the State of Nuevo Leon, the climate and conditions of that locality being particularly favorable for the development of the industry.

An industrial and commercial congress was held at Manaos, Brazil, from February 22 to 27 of the present year, the object of which was to discuss and adopt measures looking to the protection and development of the rubber industry in Brazil.

A live stock show will be held in the city of Durango, State of Durango, Mexico, in September of the present year, in honor of the centenary of Mexican independence. Many prizes will be offered for live stock and agricultural products.

Plans have been approved by which the railway company of Corcovado (Rio de Janeiro), Brazil, will substitute electricity for steam and make a complete change in its rolling stock. The company proposes to build spacious modern hotel at the top of Corcovado.

The Asunsolo ranch in Chihuahua, Mexico, consisting of 860,000 acres of land has been sold to United States parties. The consideration is said to have been \$500,000. It is in direct rail communication with El Paso, Texas, and is suitable for stock raising.

The new monument of Benito Juarez, commemorative of Mexican independence, is soon to be erected on Avenida Juarez, near the Alameda, in the City of Mexico. The statuary figures are in Carrara marble from Genoa, Italy, and are the work of Heredia.

The National Lottery Building, which was taken by the Argentine Government for use as a National Library, is one of the handsomest public buildings of Buenos Aires. The lottery commission has been authorized by the Government to construct another building for its own use, at a cost of \$500,000.

MEXICO'S MILITARY TRAINING SCHOOL^a

BECAUSE of numerous vacancies in the ranks of subordinate officers of battalions and regiments, and the small number of officials graduated from the Military College, in addition to other reasons, the War Department of the Mexican Government, which at that time was under the direction of General MENA,



CAVALRY PRACTICE.

Cadet dominating fractious horse. Notice the good seat and light hands of the rider.

submitted a bill, approved by Congress on December 7, 1904, in the form of a decree, by virtue of which the "Escuela Militar de Aspirantes" (Military Training School) was established. The school has for its object the training of subordinate officers for the infantry, cavalry, and artillery service. The institution was opened on January 29, 1905, in the remodeled building of the old factory of Santa Fe, in Tlalpam, which had been acquired by the Department for

^a By José Romero.

that purpose. The rules and regulations now in force in the school were issued at that time, according to which it was specified that young men desiring to enter the school must be Mexicans between 18 and 21 years of age. In the case of minors it was necessary to obtain the consent of the father or guardian. Further requirements provide that the candidate shall have finished a course of primary instruction, shall be of good character, vaccinated, and possessed of the health and physical strength necessary for the pursuit of a military career.

Young men having the foregoing qualifications and who wish to enter the school are required to apply in their own handwriting to



SPECTACULAR JUMPING.

Cadet accomplishing a difficult equestrian feat. Notice the jump is being made without use of the bridle and with stirrups crossed.

the Secretary of War and Navy, accompanying their applications by documents stating their ages and civil condition as well as by certificates showing their academic and social training. At the bottom of the application the father or tutor must give his consent in writing to the entry of the applicant into the army as a prospective officer. Applications are to be made so as to reach the War Department in November or during the first half of December, also in May and during the first half of June, of each year.

If the applications are accepted, and after the medical examination certifying to the physical fitness of the candidates for the military service has been made, the applicants enter the training school on July 1 and January 1, respectively, and are enrolled therein in due

course. Record is made of the class of officers the applicants desire to become and of their agreement to serve as such during the time they attend the military training school and in the army for a period of five years thereafter, the latter time to be reckoned from the date they leave the institution.

Young men admitted as candidates must apply for entry into the school on the dates already mentioned, and pursue therein three theoretical-practical courses of six months each, and after separately completing said courses enter such battalion or regiment as may be



EXERCISES IN EQUITATION

An instructor clearing a table with bar held above it, showing that none of the usual table equipment would have been disturbed.

indicated by those in charge of the school for a course of practical instruction. After a year's service as sub-lieutenants in the reserve army, if they have shown evidence of ability and of a military spirit, they will be transferred into the regular army.

Cadets are allowed 73 cents Mexican money per day for board and other minor expenses; are given 50 cents weekly as a loan; and are allowed an additional amount of 60 cents a day for the purpose of forming a fund to be applied in the purchase of equipment and uniform to be used in the school, which becomes their property on leaving the institution and comprises their first equipment as officers.



CAVALRY ON A SCOUTING EXPEDITION.

Cadets in the National Military Training School are given continual practice in exercises simulating actual warfare as nearly as possible.

Cadets are subject to military law for crimes and misdemeanors committed by them during the time they are in the service. The cadets live in the school, take their meals there, and only go out on Sundays and national holidays, or by permission and according to the judgment of the commandant.

The studies of the half-yearly theoretical-practical courses are, for the first six months, rules and regulations; auditing and military accounting; geography in general; elements of history, arithmetic, and algebra; elements of Spanish grammar and panoramic drawing. For the second six months the studies embrace tactics with the weapon used in the department to which the cadet is assigned; campaign fortifications; practical knowledge of explosives and ele-



A NOVELTY IN STEEPLECHASING.

Cadets, in a race, taking the table jump used as one of the obstacles in a military steeplechase

ments of physics and chemistry; military jurisprudence and law; geometry and trigonometry; topographic drawing. For the third six months the studies comprise general tactics or the use of the three weapons, including the application of themes relating to maps or charts of the country; theory and practice with small firearms (or artillery); communication and work in the field; military topography; military hygiene and military horsemanship for mounted officers.

In addition to the foregoing, during the three six-months' terms which make up the course, the cadets are instructed by a special professor for each subject in physical culture, swimming, fencing, and marksmanship with the revolver. Infantry cadets have a special six-



INFANTRY MANEUVERS.

Cadet company on a practice march, carrying complete service equipment. During these exercises the prospective officers undergo the hardships endured by the private soldier.



"MONKEY" DRILL.

Bareback gymnastic exercises with moving horses.

months' course in horsemanship, and mounted cadets are instructed in this branch during the entire period of the three six-months' terms. The cadets also receive military instruction in the interior service and management of the institution, as well as in maneuvering in solid phalanxes and instruction in campaign operations during the entire period of their training, daily practice being given them under the orders of the captains in command and in conformity with the programmes approved by the commander.

During the first years of the school the theoretical-practical courses of instruction were limited to two terms, and one term of practice in the service of the ranks. Experience, however, induced the com-



WALL SCALING.

This is done by two cadets using a rifle held horizontally between them as a support with which to raise a companion to the top of the wall. When the groups of two remain alone on the ground, one mounts to his companion's shoulders and is helped to the top of the wall, when he in turn trails his rifle for the remaining soldier to climb hand over hand to join his comrades.

dant of the school to broaden the course to the extent of the studies which now obtain.

All the professors of the school must be military men of acknowledged ability and practice in the subjects they teach. The school naturally seeks to impart instruction to the cadets along all lines of useful knowledge, with particular reference to a military career. The staff of teachers consists of twenty-two professors.

Examinations are held during the first two weeks of June and December of each year, no grades being accepted that fall below the approved standard known as the "three B's."

It is reported that the able director of the school, Lieut. Col. MIGUEL RUELAS, has submitted new rules and regulations in detail that are most appropriate for the needs and growth of the institution, and considering his natural ability and the desire he has to correct such defects as his experience of nearly five years has shown him exist, these regulations will undoubtedly be approved by the War Department. Under the new regulations the artillery battery will again be established and the course of instruction extended to four terms of six months each.

The present budget provides \$174,551.35 Mexican money for the use of the institution, not including items of forage for 98 horses and 6 mules now in use at the school, and the keep of which is charged to the general expense account of the Department of War.



THE PALACE OF JUSTICE IN CARTAGO, COSTA RICA

TWENTY-ONE kilometers (about 15 miles) southeast of the present capital of the Republic of Costa Rica, lies the older capital, Cartago. The city was founded by the Spanish, and even yet bears the marks of its former glory in many beautiful carved doorways and solid stone arches of the houses of that time. Cartago has still plenty of attractions for both the traveler and the native-born resident of Costa Rica. It maintains an aristocracy of its own, proud of their ancient lineage, conservative in perpetuating traditions, and firm in the belief that San Jose does not possess all the wealth or wisdom of Costa Rica.

The railway leaving the Caribbean coast at the seaport of Limon passes through Cartago on its 103 miles journey to the more modern San Jose. Perhaps on this account the ancient capital has lost much of its commercial prosperity, but it has lost nothing of the beauty of the inclosing mountains, of the picturesqueness of the valleys stretching for miles in either direction, nor of the wonderful fertility of the gardens and coffee plantations that surround her. Besides, too, Cartago enjoys a different climate from that of San Jose, and even those who smile at the mention of the city are often disposed to ascend the thousand feet above San Jose (San Jose lies at an elevation of 3,850 feet, while Cartago is 1,200 feet higher) for the more bracing air, the colder winds, and a taste of her fogs.

But Cartago is soon to be the home of a modern activity which will undoubtedly be more in accordance with her traditions and desires, with her reputation for wisdom and culture, than would be an increase in commercial prosperity alone. About two years ago there met in Washington a delegation from the five Central American Republics, and the outcome of their deliberations was a decision, among other important matters which came before them, to establish a Central American court of justice. This court was to become the mouthpiece of the unique organization founded to pass judgment on international questions arising between these Republics. The court was organized, and its sessions began May 25, 1908, but no place quite suitable to its dignity or representative of its purpose was at hand in Cartago, the place selected for its meetings. Then it was that Mr. ANDREW CARNEGIE showed his true enthusiasm for his propaganda of general peace and his practical interpretation of one

step to be taken to solve the problem. He generously asked and received permission to contribute to this court a special sum of money which should be devoted to the construction of a building dedicated solely to its use, a building in which justice and peace should be the guiding principles. Mr. CARNEGIE himself, in public addresses, has called this structure the palace of peace; in reality, and by reason of



ON THE WAY TO CARTAGO.

The valley of Orosi is situated in the Province of Cartago, at an elevation of 5,000 feet above the level of the sea. The high altitude, tropical vegetation, and beautiful scenery attract many tourists. This section is connected with San Jose, the capital city, by rail and thence with Port Limon on the Atlantic coast.

the charter which it received from the proper authorities, it is called the *palacio de justicia* (the Palace of Justice), and so it will continue to be called as long as the court exists.

The Palace of Justice in Cartago is located a short two minutes' walk from the railway station, not overlooking the city, but on lower ground to the southwest, facing Iglesias Park, across and beyond

which, with a fertile valley in between, are the evergreen and attractive mountains. As the building itself marks a new era in the history of Costa Rica and Central America, so it seems fitting that it should break new ground on the outskirts of old Cartago and look forward toward the eternal hills rather than to lose some of its character by too close contact with the past.

The area of the inclosure within which the palace of justice rests is 6,400 square meters, forming a park of about 300 feet on each side.



SEÑOR DON JAIME CARRANZA,

The eminent Costa Rican architect of the new Palace of Justice at Cartago.

danger of a flat or disproportional building is thereby overcome.

Inside the building is an attractive patio with a marble water fountain in the center, by means of which the fascinating impression of Spanish architecture is retained. This open patio measures 12 meters by 15 meters (about 40 feet by 50 feet), but it is surrounded by a covered corridor measuring 3.20 meters (about 12 feet) in width, giving passage from room to room without crossing the patio or exposure to wind and rain.

The broad flight of stone steps leads to the main entrance, with heavy iron and bronze screen-work doorways. Beyond them is a

This space is now surrounded by a well-made, solid granite pavement, and its boundary ornamented by a fine iron fence that harmonizes with the ironwork upon and within the building itself. The dimensions of the palace are 34 meters (about 115 feet) on the front and back and 37 meters (about 125 feet) on the sides. There is only one story, lofty and severe, but as the foundation is elevated above the level of the ground, and as the average height of the structure is 10 meters (about 35 feet), the effect is in reality that of two stories, and all



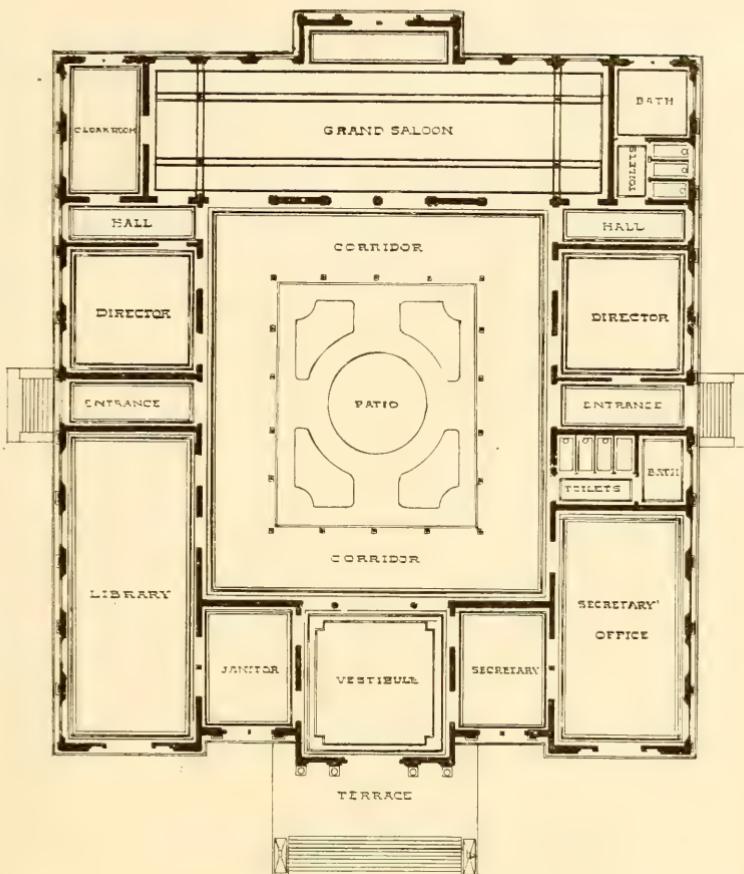
THE PALACE OF JUSTICE IN CARTAGO UNDER CONSTRUCTION.

(Photograph taken January, 1910.)

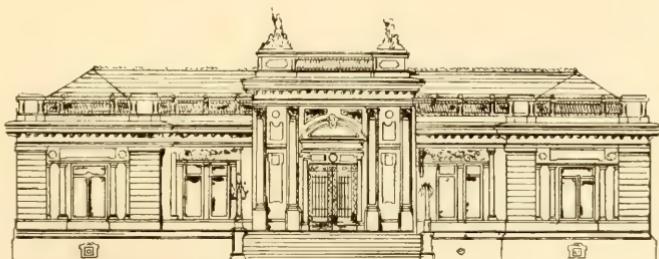
spacious passage or vestibule admitting to the patio, but bounded on each side by the rooms occupied by the staff of the court. In all there are seven rooms, of different sizes and for different purposes. Across the patio from the main entrance is a large general room, in which the sessions and receptions of the court will be held. It measures 100 by 35 feet, and is therefore somewhat larger than even the hall of the national Costa Rican Congress. To the left of the entrance is the library, spacious, indeed, for all the needs of the court, but in fact waiting for some generous donation to fill its as yet unoccupied shelves. To the right is the room of the secretary, who will have permanent charge of the building and archives. There are besides a general workroom, two justices' rooms, a robing room, and the usual toilet and retiring rooms demanded in all modern buildings.

Cartago boasts of a bracing climate, but it is never so cold that fires are necessary, and therefore the space occupied in the North by furnace and heating apparatus is saved; neither is there need for rooms for servants or other officials of the court. A porter's lodge may be easily arranged, but the judges themselves, although they come from all the Republics of Central America, are preferably housed elsewhere in Cartago, leaving the structure, therefore, unused for other purposes than a simple palace of justice. As the city has a fine water service, an abundant supply is given to the building, and the electric plant is ample, the equipment including about 200 lights, part of these showing themselves in two beautiful electroliers in the entrance and in the general meeting room. The interior decoration is classical, with abundant fresco work to give life and spirit to the effect. Special care has been taken in the decoration of the vestibule and large session room with beautiful allegorical oil paintings on the ceilings.

The exterior ornamentation will be noticeable for lighter decoration on a dark background, for the brickwork will ultimately be covered by gray stucco. Above the columns bounding the main entrance are to be placed two statues symbolic of justice and peace. On the spaces beneath them will be engraved in marble quotations in harmony with the statues above them: One in Spanish, from a speech made at the dedication of the building by President CLETO GONZÁLEZ VÍGUEZ; the other in English, from an address delivered by the late Mr. BUCHANAN. Scroll work about the building will give the finishing touches to the ornamentation as a whole. With the exception of this ironwork and some of the metal girders, practically all of the construction has been made from native material by native artisans. Even the brick are made in Cartago, and the solid wooden doors, of pure native woods, have all been carved within a few feet of the place they are to occupy.



PLAN



PALACE FOR THE CENTRAL AMERICAN
—COURT OF JUSTICE—

IBAR

FEB

ARCHITECT'S DRAWING SHOWING GROUND PLAN AND FAÇADE OF THE NEW
PALACE OF JUSTICE AT CARTAGO, ERECTED THROUGH THE MUNIFICENCE
OF MR. ANDREW CARNEGIE.

The architect, Don JAIME CARRANZA, has caught the spirit of this Palace of Justice. Born in Costa Rica, but fortunate enough to have enjoyed opportunities for further study in the United States and Germany, he brought to his task a ripe judgment and an experienced skill well equal to the occasion. He had, moreover, the genius to capture the essence of the idea, and with a building embodying in its very nature the spirit of justice and peace, he has allowed none of the charm of the Latin architecture to be lost, but has rather developed to his requirements the features which surprise and delight those who know and appreciate that fascinating side of Spanish America. The resemblance to the new home in Washington of the International Bureau of the American Republics will be at once noticed, and while no distinct effort was made to pattern this palace of justice after the latter structure, yet as the two ideas are similar within broad limits, so it is fitting that the two buildings should harmonize in outer aspect.

Skeptics there are who will not confess or recognize the utility of such a structure as the Palace of Justice in Cartago. They show a shortsightedness unworthy of the student of history. All such material presentations of an idea make for peace and good will. The eternal monument of justice and reason must have its influence in overcoming the prejudices of brute strength and ignorance. Perhaps not in five years, or even in twenty-five years, will all questions of international dispute in Central America be calmly settled within the doors of this beautiful structure, but undoubtedly the perpetual reminder of this opportunity for arbitration will in time have its true effect, and as civilization the world over advances, so will the influences of reason be appreciated in every direction, and then Central America will be glad to have begun so early to enjoy the advantages of this palace of justice in Cartago.





Drawn by N. C. Wyeth.

A MEXICAN SHEPHERD.

Courtesy of Scribner's Magazine.



ALPACAS IN PERU.

THE WOOL INDUSTRY IN THE AMERICAS

MAN'S first clothing was an animal pelt and without doubt a sheep pelt. It may be suggested that the fig leaf antedates the sheepskin as an article of wear. This may be true, but the fig leaf can be considered only as a temporary expedient which was discarded with the first cool winds which swept over the Mesopotamian lowlands.

The sheep pelt or the wool plucked or sheared from it was the principal clothing of man from before the dawn of history down almost to the present day. Now cloth made from vegetable fibers, principally cotton, has a more extended use than wool. But this does not mean that cotton and linen are displacing wool as an article of human wear. Far from it; the use of wool constantly advances by enormous strides, and the even greater advance in the use of cotton is due in no small measure to the fact that the supply of wool can not meet the demand for clothing. Mankind must perforce wear the vegetable fibers or go unclothed. The same fact is true of the product of the silkworm; the supply can never equal the demand. Cotton, of course, has conquered for itself a new field, the clothing of the unclothed races of the earth. In addition it has supplied new articles of clothing to civilized man, whose ancestors wore but little else than wool. The European or American of to-day does not wear less wool; in truth he wears more, but he also wears more articles of clothing, and these, for the most part, are cotton.

In the economic development of civilization certain basic facts have become apparent. Of these fundamental facts—they may be called laws of development—one of the most important is that in a well developed and thickly settled country it is easier to increase production of the vegetable products used for food and clothing than it is to increase the animal products. In other words, the land will feed and clothe more people directly from the soil than indirectly from flocks and herds. It is otherwise in new countries, the pastoral industry in the beginning and up to a certain point is the most easily extended; beyond this point the nature and methods of the industry must change or it fails.



PRIZE RAMBOUILLET RAMS FROM ARGENTINA.

Up to the year 1900 the pure-bred Merinos were more or less neglected in the Argentine Republic, but a fall in the foreign market in the price of coarse wools and an increased demand for fine Merino wool turned the attention of the Argentine and Uruguayan breeders to the Merinos, and particularly to the Rambouillet and Negrette varieties, of which large numbers were imported at fancy prices. These three rams were Argentine bred and formed part of a group of five which won the gold medal for the best group of Rambouillet rams at the Buenos Aires fair of 1902.

There is a close parallel all over the world between the cattle and the sheep industry, but there are some important differences as well.

It has rarely happened and can scarcely happen again that cattle will anywhere be raised primarily for their horns and hides, but the raising of sheep for their wool is one of the well-recognized steps in the industry. It is the fact that this can be done so as to pay a handsome profit that built up the great sheep industries in the western part of the United States, in Australia and New Zealand, in South Africa, and



Drawn by N. C. Wyeth.

A NAVAJO HERDER IN NEW MEXICO.

Courtesy of Scribner's Magazine.

now is building up a greater sheep industry in South America. Free or very cheap pasturage is the fundamental condition for this kind of sheep raising. Were it not for these new lands, where the cost of feeding the sheep is nominal, the price of wool would advance to a point where wool clothing would be beyond the means of any except the very rich. Sheep raising is a profitable industry in England, or Germany, or the eastern half of the United States, not because of wool but because of mutton. The fleece is a by-product, just as the hide of the steer or of the dairy cow is a by-product; the principal value of the animal is its flesh. In the new sheep centers of South America the principal value of the animal is its wool, and fortunes were made from the flocks even when not a pound of mutton was exported or sold.

Of course this condition was and is temporary; the purpose of the sheep raiser is to realize from his mutton as well as from his wool; but the fact that the industry is profitable without regard to the food value of the sheep is the thing that has built and is building up the sheep industry in the new lands of the world.

Wool, as the word is used in commerce, is not a product alone of the sheep. It may be wool, although it comes from the backs of several varieties of goats, from the camel, the alpaca, the guanaco, the vicuña, or the llama, as well as from the sheep. It is the thing itself and not the zoological classification of the animal which determines whether the fiber is wool, hair, or fur. Since the classification is commercial and not scientific the line between these three classes is necessarily vague and indistinct. For instance, the under covering of the camel may be camel's wool or camel's hair, and so we have alpaca hair or alpaca wool. From the sheep there are many varieties of wool, long and short, straight and curly, coarse and fine, and, what is generally more important than any of these, varieties in the serrations or imbrications appearing on the surface of the fibers.

It is these imbrications which give to wool its peculiar value as a textile fiber, and it is these imbrications which made it possible for the primeval savage to produce cloth from wool when neither his tools nor his intelligence would have enabled him to utilize a vegetable fiber, not even cotton, the most adaptable. Without other tools than a round stone, cloth may be made from wool simply by spreading it out evenly and then hammering it while moist. In this process the tangled masses of wool interlock and mat together, the imbrications on the fibers mutually clutching and holding each other. This of course is felt, undoubtedly the first cloth, and even to-day the principal and often the only cloth of millions of human beings of central Asia. Different kinds of wool differ much as to the number and character of these imbrications, and upon this difference depends

often the value of the wool, and always the purpose for which it is used. These imbrications are most numerous, pointed, acute, and distinct in fine merino wools. In some of these the imbrications may amount to 2,800 per inch, and be sharp-pointed, like a wasp's sting. Woolen cloth or felt made from such wool as this will wear like iron. Southdown wool may have 2,200 serrations to the inch and Leicester only about 1,800. In some of the inferior wool the serrations may count only 500 to the inch, and in mohair they disappear almost entirely. In diameter the fiber may vary from 1/1800 in the best Saxony lamb's wool (merino) to 1/250 of an inch in coarse African wools. It must be remembered that the commercial value of the wool is not entirely dependent either on the serrations or diameter



LOADED LLAMAS IN THE PERUVIAN HIGHLANDS.

The *camelus*, the camel of the Old World, and the *auchenia* form the two existing genera of the family *Camelidae*. The *auchenia* are the New World representatives of the family and include the llama, the guanaco, the vicuña, and the alpaca. The llama and the alpaca were domesticated by the natives of the High Andes long prior to the coming of Europeans, and the former was then used as at present as a beast of burden. It was in fact the only beast of burden used by any of the original peoples of the two Americas. Llama wool passes for alpaca, and is indistinguishable therefrom, except that it is somewhat coarser.

of the fiber. Mohair, for instance, is an expensive wool, although almost without imbrications, and alpaca, a coarse wool, is also high priced.

It is important in considering wool as a commercial commodity to keep in mind the three different kinds of cloth made therefrom. These are commercially known in English as felts, woolens, and worsteds. The processes in making these three kinds of cloth are so different as to make them entirely different industries, employing

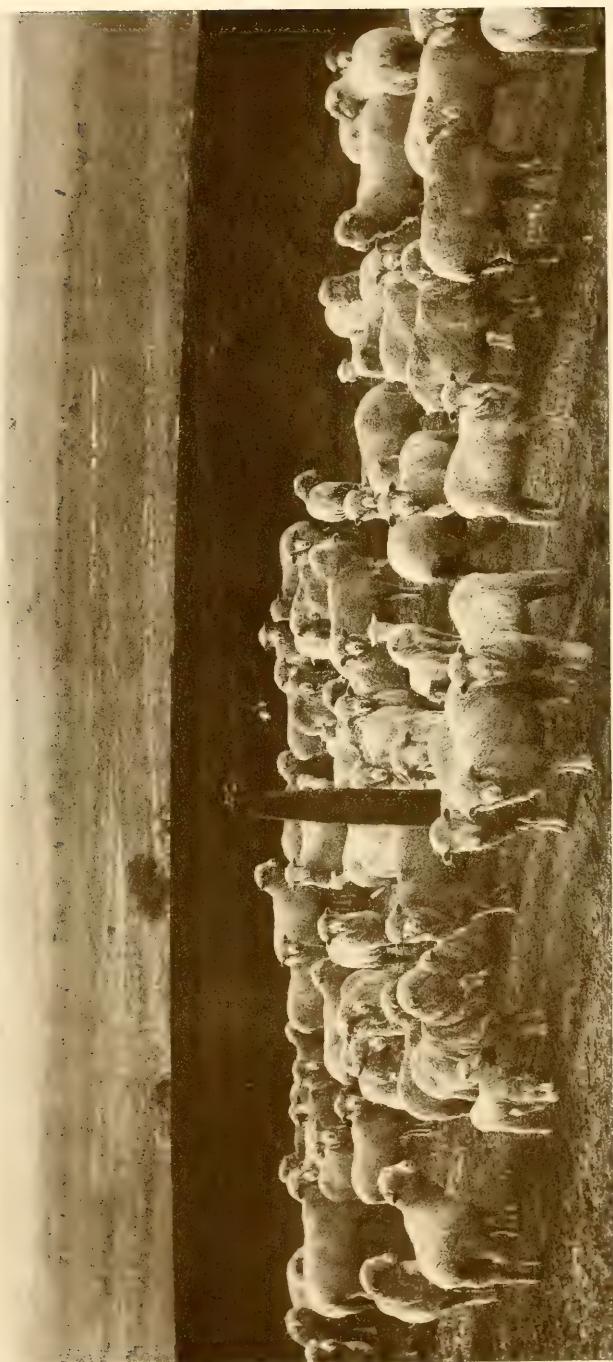
entirely different machinery. Felt is made from the wool or fur in mass, the cloth holding because of the lock clutch of the imbricated fiber. Woolens and worsteds are spun from threads, but the threads in the two kinds of cloth are prepared in a different manner, and the weaving is entirely unlike. Formerly, entirely different kinds of wools were used for making the two kinds of cloths, or rather it is more accurate to say that only certain kinds of wools could be used in making worsteds. Almost any kind of wool could be used for making woolens, although some were much more suitable than others, and, as a rule, those least suitable for woolens were best suitable for worsteds. In effect, therefore, certain wools were used for woolens and certain other wools for worsteds. With the improved modern machinery used in worsted mills these limitations are fading away, so that worsteds can now be made from wools formerly not used for this purpose.

The wool used for making woolens is carded; that for worsteds is combed. The effect of these two processes is that in the first the wool fibers are crossed and interlocked as much as possible, and in the second they are drawn out to be parallel, as in cotton or linen. Woolen yarns, although hard-spun, look and feel light and fluffy. Worsted yarns appear finer and stronger. The fundamental distinction between the two classes is in this crossing and interlacing of the fibers in making woolen yarns, a process peculiar to this kind of textile, and the apparently simpler process of drawing out the fibers into a smooth parallel relationship to each other, as is done with other textile materials. As a matter of fact, the former is the much simpler process and antedates the latter by some thousands of years.

The weaving of the two kinds of cloth is not unlike, at least not to the unskilled observer, except in one particular, and this is a most important one—woolens are fulled and worsteds are not. The fulling of the cloth, accomplished by heat, moisture, and pressure, brings together and interlocks, by means of the imbrication of the fiber, the several threads entering into the cloth into a more or less felted whole. The cloth shrinks, sometimes as much as one-half, and in such material, as for instance the so-called doeskins and broadcloths, it appears and feels like felt.

It is this process of semifelting the cloth, made possible by the peculiar lie of the fibers in the yarn, that distinguishes woolens from worsteds. Formerly, entirely different classes of wool were used in the two cloths—for woolens, the short-staple, highly imbricated carding wool, merino for example; and for the worsteds, the long-staple, slightly imbricated or smooth combing wools. By modern machinery it is possible now to use the short-staple wools in making worsteds.

In practice the raw wool, after being washed and scoured, is subjected to a series of combing processes, in each of which the particular



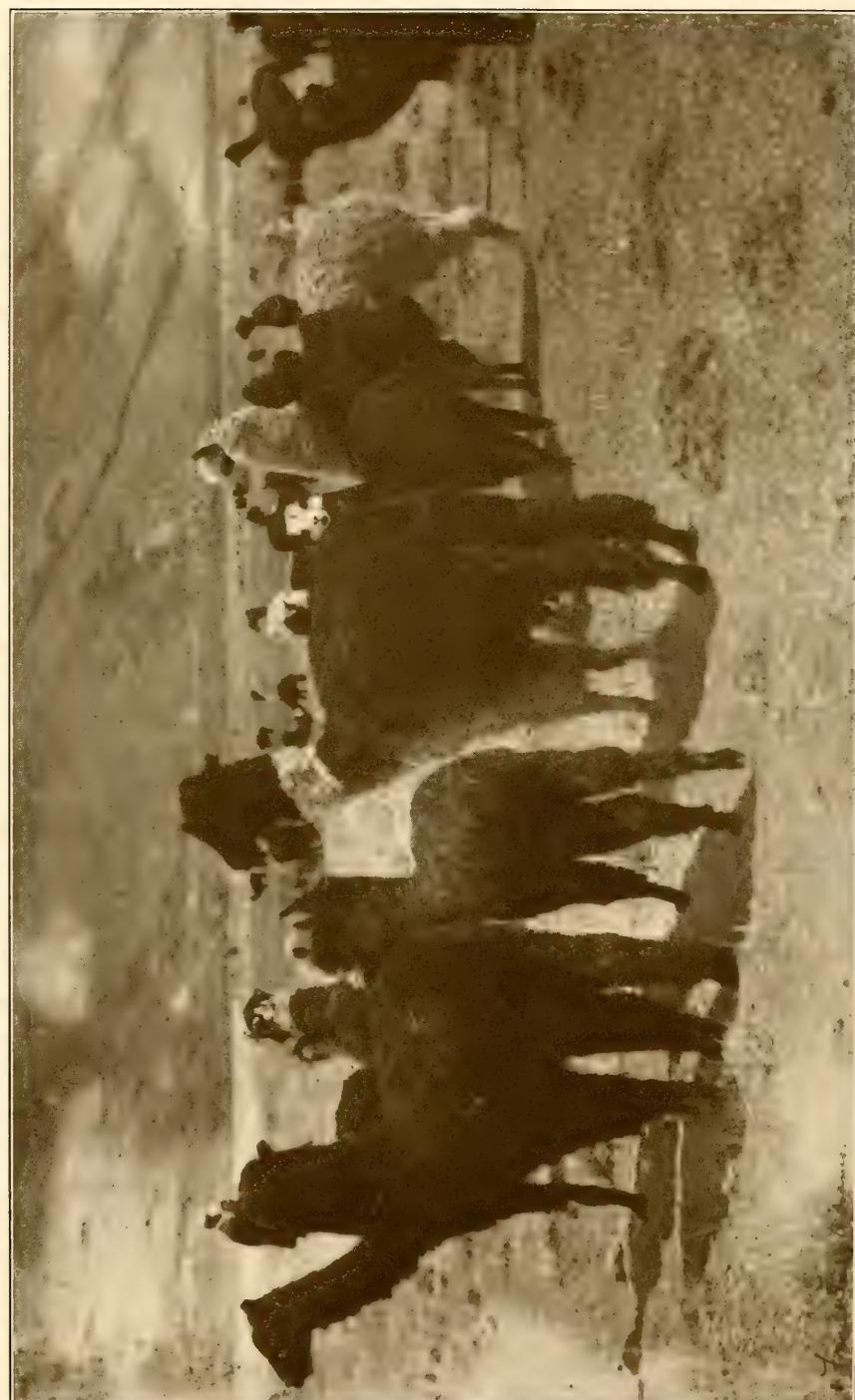
A SHEEPFOLD IN URUGUAY.

The sheep represented in the illustration are pure-bred French Merinos of the Rambouillet breed. This is one of the most popular of all the Merino breeds, and fancy prices are paid in Uruguay and Argentina for the best of the imported stock. It is the custom to cross the Rambouillet rams on *criollo* stock, descendants of the British long-wool breeds; the gelt of this cross produces a wool with fiber longer than the Merino and finer and more highly matted than the *criollo*. This wool is quoted and sold in the market according to the proportion of the cross, each proportion being a different class of wool, one-half, three-eighths, or one-fourth blood, as the case may be.

fibers suitable for a certain purpose are extracted. The residuum after each combing is called a waste, although its value per pound may have been augmented by the extraction of the lower-priced fibers.

According to the United States census reports for the last census, taken in 1900, manufactures of wool ranked tenth in the list of American industries. The total capital invested was \$310,179,749 and with an output valued at \$296,990,484 a year. In the classification adopted the manufacture of clothing is not included. There were 1,035 factories of woolen goods, with a capital of \$124,386,262 and a yearly output of goods valued at \$118,430,158, and 186 worsted factories, with a capital of \$132,168,110 and an output of \$120,314,344. Since 1900 there has been an enormous increase in the wool manufacturing industry, principally in the manufacture of worsteds. At the same census the number of sheep in the United States was 39,852,967. Since then there has been a 43 per cent increase in the number of sheep, as appears by a report issued by the Census Office on January 1, 1910, which shows 57,216,000 sheep in the country at the present time. These are valued at an average of \$4.08, giving a total value of \$233,644,000. By the census of 1900 the country produces 276,567,584 pounds of sheep's wool and 961,328 pounds of mohair and goat hair. Estimating the same average clip of wool as at that time, the production of the country at the present should be about 400,000,000 pounds of wool. In reality it should be greater, on account of the improvement in sheep breeding.

There are several hundred varieties of sheep both in the domestic and in the wild breeds. The former have been under the dominion of man since before the dawn of history. Whether these are derived from any one of the existing wild species, or from the crossing of several or from some now extinct species is a matter of conjecture even to scientists. Variations in the different domestic breeds are very great and in no other particular greater than in the wool. Domestic sheep, not considering the Asiatic breeds, may be classed under two heads—the Spanish and the British breeds. The Spanish breed is the Merino, which has modified more or less the sheep of all Europe, including the British Islands, North and South America, South Africa, and Australia. The Merino has a very characteristic appearance, which easily distinguishes him from other breeds. He has a thick covering of wool over the forehead and cheeks, his horns are large, ponderous and convoluted laterally. The wool is long, soft, and twisted into silky looking spiral ringlets. The wool fibers are highly imbricated and possess in the highest degree fine felting qualities. The origin of the Spanish Merino is not very well known, but the breed is known to have as a foundation the original breed intro-



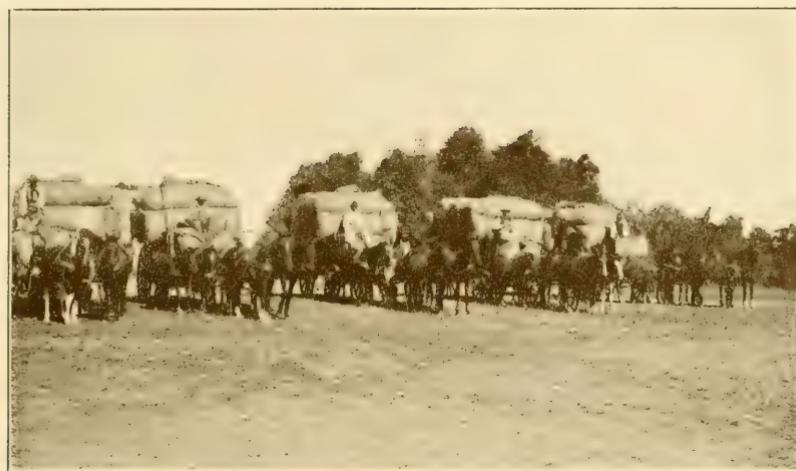
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A FLOCK OF ALPACAS ON "THE PUNA" IN PERU, 14,000 FEET ABOVE SEA LEVEL.

The alpaca is rarely found below an altitude of 5,000 feet, and attempts to introduce it into countries away from its native habitat in the Andes have been unsuccessful. Its wool is of an exceedingly fine luster and quality, and varies in length from 2 to 6 inches. In color it is black, white, or gray; shades of brown or fawn being rare.

duced into the Peninsula by the Romans upon which was crossed certain English sheep, most probably the Leicester or Lincoln sheep.

Up to the time of the Napoleonic wars, the position of Spain in the wool trade was at the head. Spanish wool went all over the civilized world and enjoyed a reputation for being the best. However, the peninsular wars, with the attendant evils following thereon, had a most disastrous effect on the wool trade of Spain and produced a depreciation in its quality and a consequent loss in exportation for the wool of the famous breed. Fortunately for the world and for the reputation of the Merino, other countries had prior to the peninsular wars imported Spanish Merinos and had already established a reputation with the breed, both pure and crossed on native breeds. The most important of these importations and the one that has given

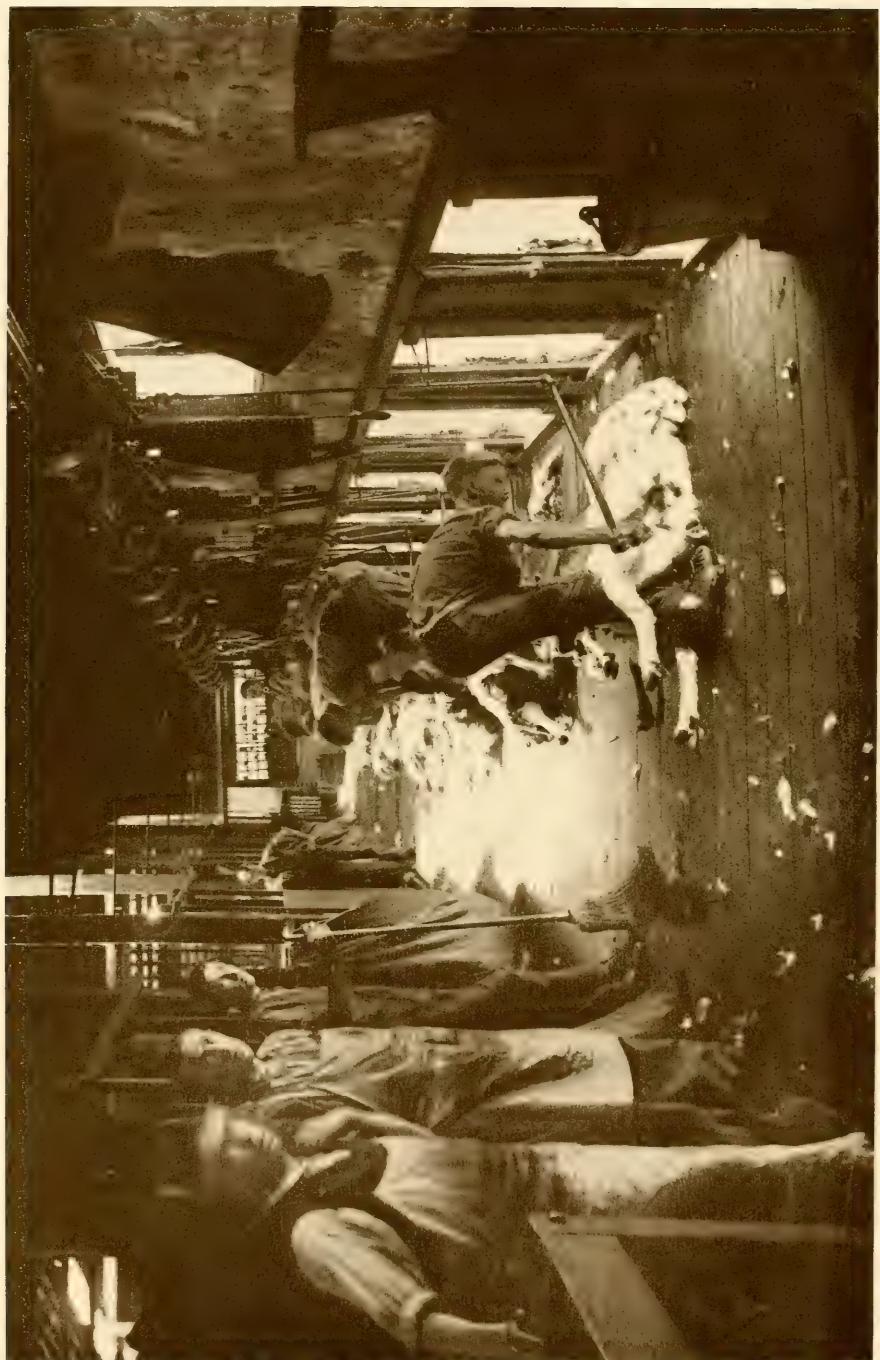


CARTS LADEN WITH WOOL LEAVING AN ESTANCIA IN URUGUAY.

Uruguay is second to the Argentine Republic in South America in the wool and sheep industry. The export of wool from Montevideo is close to 100,000 bales per annum, the greater part of which goes to France.

the stamp to the high-class Merino of the present was the introduction into Saxony in 1765 by the elector, of Spanish Merinos, which he judiciously crossed upon native breeds, producing what is known as the electoral breed. The Saxon wool supplanted in reputation the Spanish wool and has held to the present time its position as the highest class wool in the world, unless we except the wool or hair of the Cashmere or Thibet goat, the vicuña and the alpaca of South America. Australia is the leading producer of Saxon wools.

Spanish Merinos were taken to Hungary in 1775 and to France one year later—the most famous French Merino is the Rambouillet. Spanish Merinos were first brought to Rambouillet by Daubenton in 1782, and from this first importation the breed was developed. It is



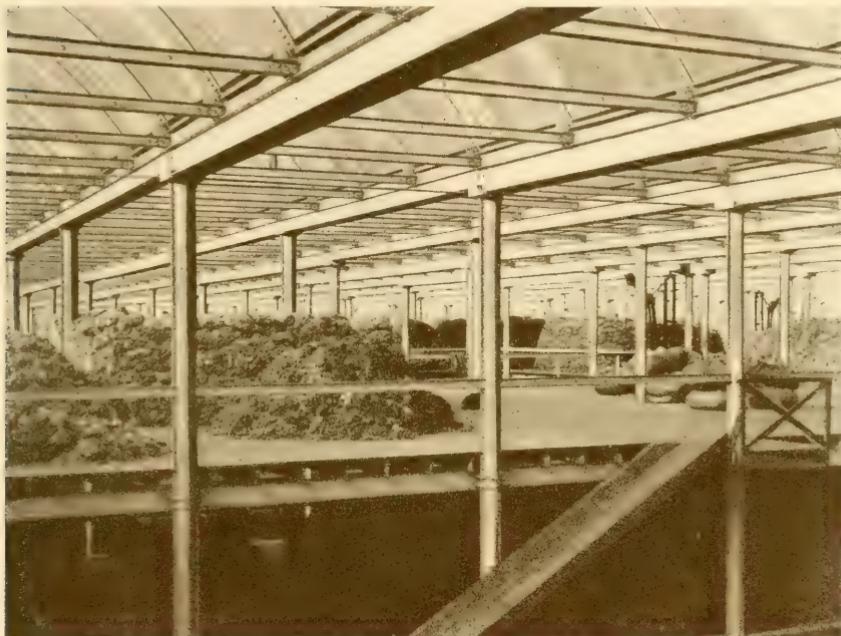
Photograph, Underwood & Underwood, N. Y.

SHEEP SHEARING BY MACHINERY.

On the larger sheep ranches in South America the method of shearing by power is being introduced. The new method has several distinct advantages over hand shearing: the process is much faster and consequently more economical; the fleece is taken off cleaner, weighs more, and is in better condition; and the shearing is more humane, there being no nicking of the sheep.

now known all over the world as one of the best of the Merino strains. Spanish Merinos were brought to the United States in the early colonial days, but the breed was lost in a promiscuous crossing with the earlier imported British breeds. The first Spanish Merinos whose descendants have been kept pure were brought to the United States in 1802.

Merinos were taken to the Spanish-American colonies almost with the first colonists, and are the foundation and almost the sole foundation of the so-called native breeds in all the American Latin Republics,



HIDE AND WOOL SECTION OF CENTRAL PRODUCE MARKET, BUENOS AIRES.

The Central Produce Market of Buenos Aires is the largest wool and hide market in the world. The building is an iron structure four stories high, covering an area of 182,000 square feet, and was erected at a cost of about \$4,100,000. There is a complete installation of cranes, elevators, and apparatus for loading and unloading the principal export products of the Argentine Republic. Immense quantities of wool, hides, and cereals are annually shipped from this market to the large commercial ports of the world.

but the breed was not kept up, and consequently decayed even more rapidly than subsequently in Spain following the Napoleonic wars.

While Spain has the honor of having produced the most valuable single breed of sheep, bred for wool peculiarly suitable for clothing, the British Islands have produced the greatest number of valuable breeds of sheep bred for wool suitable for all purposes, and even for the particular purpose for which Merino wool is best suited, but little inferior thereto. Of course in the mutton breeds Great Britain has always stood without a rival, but also in its long-wool breeds it is with



TAKING THE WOOL TO MARKET IN ARGENTINA.

The *estancias* in Argentina and Uruguay are often immense estates of several hundred square miles. In the more thickly settled parts of these countries they are devoted to diversified agricultural industries; in the newer territories the sheep and cattle industries predominate. The wool is clipped from the sheep in a single blanket roll, held together by the imbrications of the fiber. A large number of these rolls are packed together into a single bale and in this form carried by wagon to the nearest railroad point, from whence it is conveyed to Buenos Aires for exportation. In Uruguay, owing to the hundreds of navigable streams which traverse the country, nearly every *estancia* has its own wharfs and boats for carrying wool and other products to market.

out rival in wool of this character. The British breeds are classified as long wool, short wool, and mountain breeds.

The long-wool breeds are the Leicester, Border Leicester, Cotswold, Lincoln, Kentish, Devon Longwool, South Devon, Wensleydale, and Roscommon.

The short-wool breeds—this class includes among others the famous mutton breeds—are the Oxford Down, Southdown, Shropshire, Hampshire Down, Suffolk, Ryeland, Somerset, and Dorset Horned.

The mountain breeds are the Cheviot, Blackfaced Mountain, Herdwick, Lomond, Dartmoor, Exmoor, Welsh Mountain, and Limestone.



WOOL WAREHOUSE IN LIMA, PERU.

While the wool industry of Peru as a whole has not attained the importance of that of the Argentine Republic, it is yet a considerable industry, and in alpaca Peru occupies the first place. A large proportion of both sheep and alpaca wool is consumed in the country, but in 1906 it exported 10,048,238 pounds, of which more than half (5,934,590 pounds) were alpaca. Since that year there has been a slight falling off in exports.

All of these breeds are English except the Border Leicester, Cheviot, and Blackfaced, which are Scotch, the Welsh which belongs to Wales, and the Roscommon to Ireland.

The true mountain breeds are horned sheep, usually the males only in the Cheviot, the Herdwick, and the Welsh, although some Cheviot rams are hornless.

All the other breeds are hornless except the Somerset and Dorset and in these both the rams and the ewes are horned.

The Leicester from an historical standpoint is the most important of the long-wool English sheep, and it was the great reputation of



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SORTING RAW WOOL INTO GRADES.

There are two grading processes through which the raw wool passes before being spun into yarn. The first is the sorting of the wool as shown in the picture. This may, for convenience, be termed a grading for quality. The second process is the combing, which may be termed a grading for fiber length. Wool comes to the market in fleeces just as it is sheared from the sheep. The wool is graded according to the portion of the animal from which it comes. It is the business of the sorter to pick the fleece to pieces, grading it into three or more qualities according to the breed of the sheep.

the wool of this breed that gave England in the past its prominent position as a wool-producing country. Most important of all, it is the Leicester blood which is the foundation of many of the other best English breeds, and as such has extended itself over all the world. The wool is fine, white, and long-stapled. The Cotswold is distinguished by a heavy tuft or lock hanging over the eyes. The fleece is heavy, thickset, and characterized by a bold and large curl. Under ordinary circumstances a Cotswold fleece weighs 8 to 10 pounds, although double this weight is not uncommon. The staple runs above 12 inches in length.

The Lincoln is the largest and heaviest fleeced sheep. Many of the fleeces will weigh from 18 to 20 pounds, with a staple 20 inches in length. The Lincoln resembles the Cotswold, but has a less-pronounced tuft on the forehead and the wool is closer curled.

The wool of these sheep has a fine glistening appearance which has earned for it the name of "luster wool."

The Southdowns, Shropshire, Hampshire Downs, Oxford Downs, and Dorsets are among the better-known short-wool sheep. The Dorset staple is the shortest.

The Cheviot is the best known among the mountain breeds. The Cheviot is sometimes called a middle-wool sheep. One of the most valuable characteristics of this breed is its hardiness. It will live and thrive under conditions where other sheep could not exist.

The French breeds best known are the Choletaise, which carry a good fleece, the Larzac, a short, thick-set animal with long-fibered but rather scanty wool, the Berrichome du Crevan, better known for its heavy milking qualities than for wool, and the Manchamp sheep, known as La Chamois, which produces a most excellent long and fine-fibered combing wool.

In addition to the domestic sheep introduced into America by the English, Spanish, and Portuguese settlers, South America possesses a group of wool-bearing animals which are native to the country. This group, the *auchenia*, is one of the two branches into which the existing genera of the family of the *camelidae* is divided. The other branch is the camel (*camelus*) of the Old World.

Most authorities agree in dividing the *auchenia* into four species, the guanaco, the vicuña, the llama, and the alpaca. The two last named are not known in the wild state, but were domesticated by the native Indians long prior to the coming of the Spaniards to South America. There is no reason to doubt that the guanaco and the vicuña might also be brought under subjection.

The guanaco is the largest and most widely spread of all the species. It is found from the equator south to Tierra del Fuego, where it constitutes the principal food of the savage Onas. It is about the



Courtesy of the National Geographic Magazine.

CUZCO, PERU, INDIAN WEAVING A PONCHO.

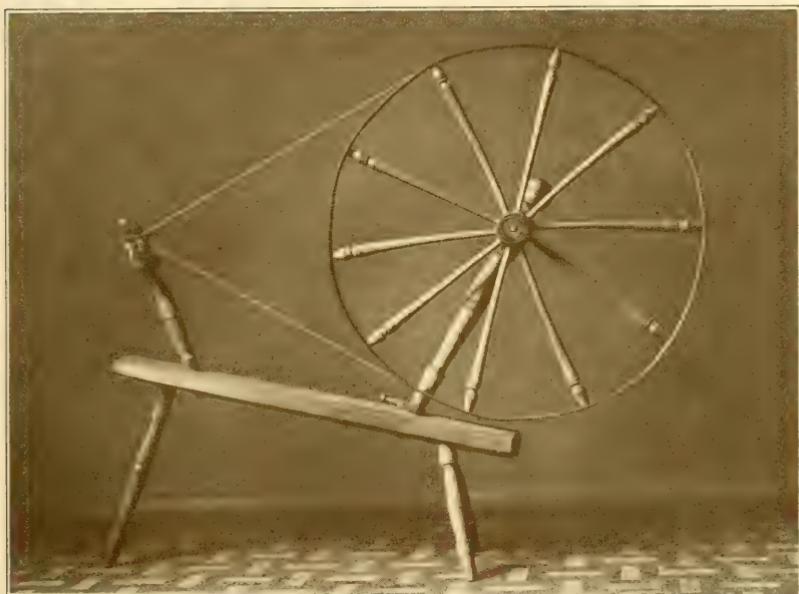
The best ponchos are of native weave and are made of alpaca wool. The head is thrust through a slit in the middle, and the ponchos are worn as a protection against both rain and cold. In order to get a sufficient width they are often woven in two or more strips.

size of the English red deer, or a little smaller than the North American elk.

The llama is the next in size. Its habitat is the mountain region of Peru, Ecuador, and Bolivia.

Both of these animals are principally valued for food and as beasts of burden, although they yield a fine quality of wool or hair, which is ordinarily sold as alpaca.

The vicuña is a smaller animal, about the size of the fallow deer. It is found in the high mountains of Bolivia, Peru, and Ecuador, sel-



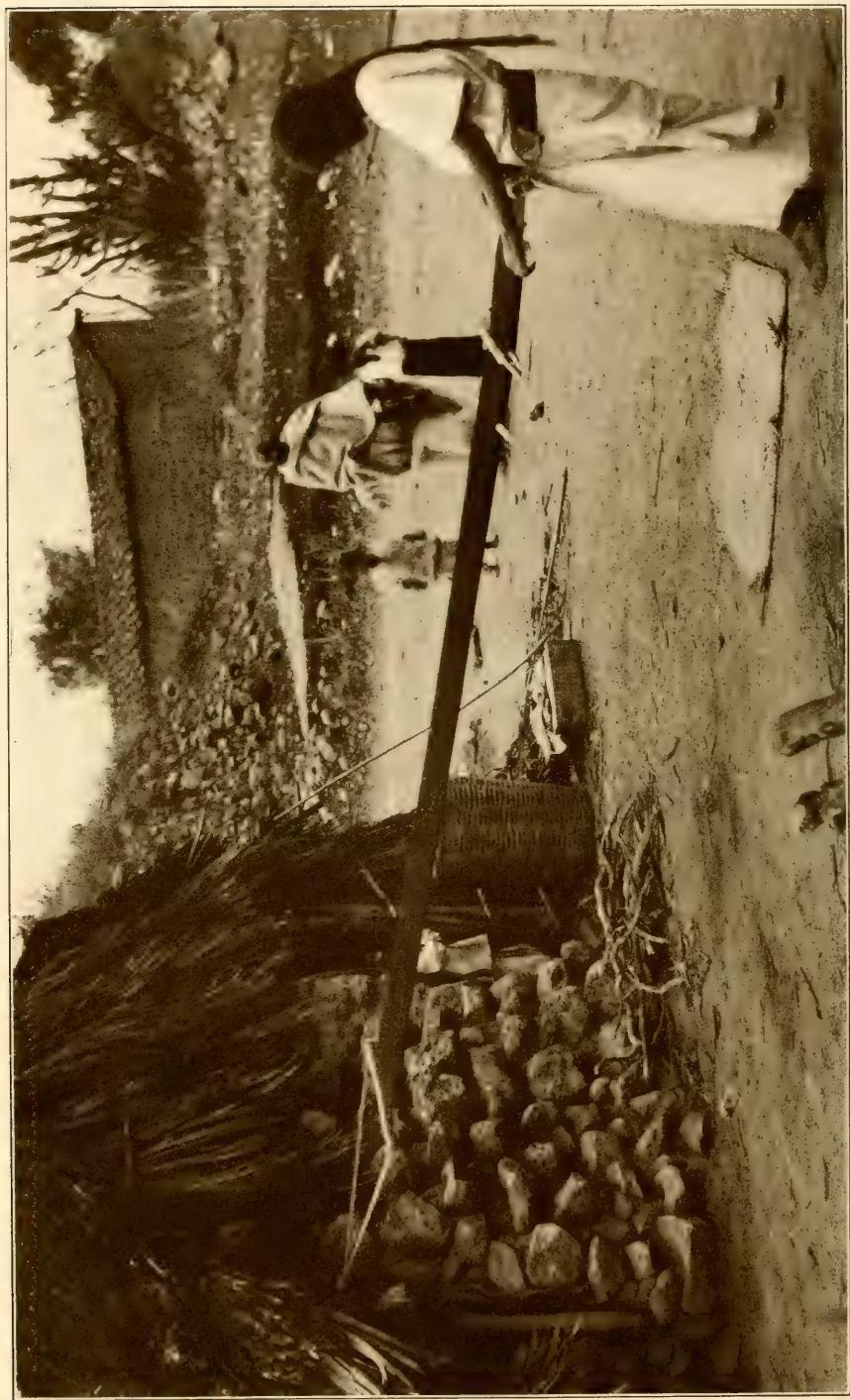
Courtesy of the National Museum.

A SPINNING WHEEL.

Wheels for spinning wool, flax, and cotton are more or less alike. On account of the need of a harder spun yarn, the cotton wheel is larger (about 4 feet in diameter) and the operator stands at the work. The flax wheel is small (about 2 feet in diameter) and the operator sits in front of it. The wool wheel may be anywhere between these sizes, but is usually small enough for the spinner to sit at her work. With the pin, shown lying on the frame, she whirls the wheel with her right hand and with her left feeds onto the spindle the loose rolls of wool as they come from the card. The spindle revolves at a high rate of speed, twisting the loose slivers into a hard yarn.

dom descending below 13,000 feet. Although it may be tamed, it is to all intents and purposes a wild animal. It yields an exceedingly fine and delicate wool of a reddish-yellow color, which is worth about twice as much as alpaca.

The alpaca was the wool-producing animal of the Incas, as it is yet of most of the people of the Andes and the west coast of South America. It is found principally in Peru and Bolivia, but does not thrive below about 5,000 feet. Like the domestic sheep, it is kept in flocks or herds and driven from pasture to pasture in the mountains and



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WEAVING THE SARAPE IN MEXICO.

The *sarape*, called in English *serape*, is the shawl or blanket worn as an outer garment by the Mexican Indians. It is woven in strips, each strip of a different color, and joined together into one whole. The weaving is of the most primitive order, nothing which could be called a loom being used, and yet the process is in principle identical with that of the most modern power loom. As can be seen in the picture, the warp threads are held taut by the weight of the woman's body thrown on the broad belt surrounding her waist. She has just shot the weft and is beating it up close.

brought down from time to time into the villages to be sheared. The wool varies in length from 2 to 6 inches, is of a lustrous and fine quality, and is mostly white, black, or gray, shades of brown or fawn being rare.

Its valuable qualities were first made known to Europe by an English wool manufacturer in 1836, although before this time small quan-



Photograph by the National Museum.

WEAVING A NAVAJO BLANKET.

Before the advent of the white man none of the natives of the North American Continent were spinners or weavers of wool for the simple reason that they possessed no wool-bearing animals. The Navajos of the north of Mexico were taught wool weaving by the early Spanish missionaries, from whom they also acquired the sheep. The Navajo blankets have become justly celebrated. They are woven on the simple loom shown above, and formerly were colored in most pleasing and intricate designs of various colors by native dyes of delicate tones. Recently the Navajo women have learned the use of the bright aniline colors of the white man, to the serious detriment of their famous product.

ties of alpaca had been sold on the European markets. As a result of his experiments this manufacturer, Sir THOMAS SALT, of Bradford, built a large factory, employing 3,000 hands, for the exclusive manufacture of alpaca cloth. This may be said to be the beginning of the distinctive alpaca industry outside of South America. Several



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A CARDING MACHINE.

The old hand cards consisted simply of two flat boards about 8 by 5 inches into which were set fine wires of equal length and 100 to 500 to the square inch. The wires were all bent backward in the middle at the same angle, making the appearance of a large rough hairbrush. The passing of the wool between two cards, held points together, constituted the process of carding. The position of the two cards with regard to each other, as they were moved one over the other, was one of the main factors in differentiating worsted and woolen manufactures. In worsted carding the object is to lay the fibers straight and as nearly parallel as possible; in woolen carding the object is to cross and interlace the separate fibers. In modern use the carding machine, as shown above, obtains these results for woolen or worsted spinning through card rolls, between which the wool passes from one set of rolls to another.

attempts have been made to introduce the alpaca into Europe and Australia, but so far the attempts to acclimatize the alpaca outside of its native habitat have failed. The animal is undoubtedly one of the most valuable of the wool-producing animals. The demand for its wool is unlimited. It is remarkably hardy and thrives under the most unfavorable conditions, but experiments so far seem to prove that it can not exist except in high altitudes.

The export of alpaca wool from Peru is from 4,000,000 to 6,000,000 pounds and of vicuña wool something under 10,000 pounds. Alpaca usually constitutes about two-thirds of the total Peruvian wool exports, but it constitutes almost the whole of the domestic manufacture.

Ecuador and Bolivia are also alpaca-exporting States. The export of Chile in 1908 was about a quarter of a million pounds of alpaca and a small quantity of vicuña, most of which came from Bolivia.

All of the South American countries are producers of wool from the domestic sheep, and most of them are exporters to a greater or less degree; but the recent development of the sheep industry in Argentina, Uruguay, and Chile lends a particular interest to South America as a purveyor of this one of the world's staple articles of trade.

As has been said, the original domestic sheep of Spanish America were the descendants of Spanish sheep, for the most part Merinos, brought by the earlier settlers. These sheep were allowed to degenerate, so that the native or so-called "criollo" stock in all of these countries ranks low both as a wool and as a mutton producer.

The new industry in the three States mentioned is founded upon stock introduced from Europe, principally England, directly or through the Falkland Islands. The Merino stock comes from France and England, but the long-wool stock is English. Much attention is paid to the keeping up of the stock through the purchase of high-priced rams from England and France.

About 75 per cent of the sheep in Argentina, Uruguay, and Chile is of English long-wool blood, Lincoln, Leicester, Cotswold, etc., about 20 per cent is Merino, English, French, and Australian strains, and the remaining 5 per cent is *criollo* and British mountain breeds, mainly Scotch Black Face. Only a small percentage of the stock is full blood. The practice is to keep on each large sheep ranch small flocks of full bloods, whose get is used for crossing with the larger range flocks.

The annual wool clip of Argentina for the season of 1849-50 was 8,000,000 kilograms, 17,600,000 pounds. This was a respectable showing for the time and gave Argentina a position of importance in the wool trade. The wool, however, was a coarse grade, most of it what is known to the trade as Cordova, used by worsted spinners for carpet yarns. In fifty years the industry had increased thirtyfold,



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TWISTER USED IN MAKING YARN.

One of the processes in making both worsted and woolen yarns is that called twisting. Twisting is a part of the spinning process proper which, in making worsteds, consists in first drawing out or drafting; second, twisting the drawn-out fibers; and third, winding the fibers, now called yarn, on the bobbin.

so that the clip of the year 1899-1900 was 239,000,000 kilograms—525,800,000 pounds. This represented about one-fourth of the world's production. The quality of the wool meanwhile had improved.

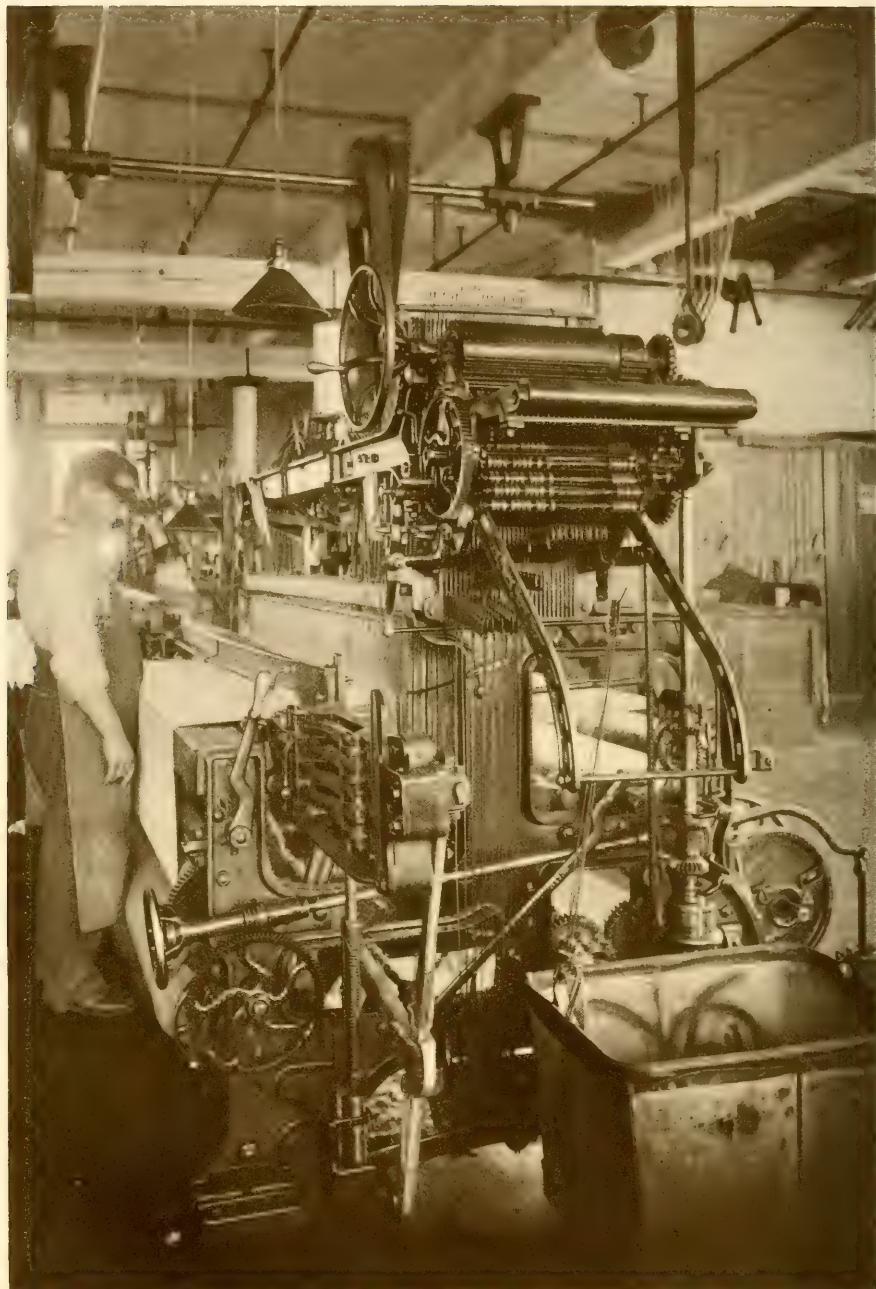
A recent census of the country (1908) shows 67,211,754 sheep. It is almost impossible for the mind to grasp these figures, but some idea of their significance can be gained when it is stated that "*if the animals were assembled in a gigantic drove, 12 abreast, they would reach across the continent from New York to San Francisco.*" This places Argentina second to Australia, which leads the world with over 83,100,000, the United States third, with about 56,000,000, and England fourth, with about 35,000,000.

The export of wool from Argentina for the year 1908 amounted to 386,183,600 pounds.

At the western end of Magellan Strait stands the southernmost city of the world, Punta Arenas. It was originally a Chilean penal settlement; it is now the center of one of the largest sheep industries in the world. It was made a free port in 1880, and the sheep industry dates from this time. Both the mainland of Patagonia and also the Archipelago of Tierra del Fuego are divided between Chile and Argentina, and the sheep industry is spreading over the whole country. In the territory tributary to Punta Arenas it is estimated that there are now about 4,000,000 sheep.

Most of the sheep of Tierra del Fuego and of southern Patagonia have been brought from the Falkland Islands. The stock is English long wool, but not much of it is pure bred. According to a census for the territory of Magellan, which includes the Chilean portion of the country, taken about four years ago, there was in the whole of the Chilean territory 1,873,709 sheep. Of this number 4,800 were pure bred, 358,903 were cross bred, and 1,510,006 were *criollo*. The *criollo* stock is the ordinary Falkland sheep; the cross bred is the progeny of these ewes from the full bred ram. Nearly 800,000 of these sheep are on the main island of Tierra del Fuego and on Dawson Island, which together form one district. Over 800,000 are on the Brunswick Peninsula north of Punta Arenas, and over 200,000 are in the Last Hope district which extends to the northern limits of the territory. The remainder are on Beagle Channel and in other sections of the territory. So rapid has been the growth of the sheep industry in the Territory of Magellan that at the time of the taking of the census 44 per cent of all the sheep in Chile were in this area.

In the Argentine section of this region the growth of the industry has also been very rapid, but has not yet attained a growth equal to that in the Chilean section. This has been due to two causes; first, the Argentine territory in the neighborhood of the Strait of Magellan is less accessible than the Chilean territory, and second, the growth of the sheep industry in other parts of Argentina has been so great and



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A MODERN LOOM.

The series of inventions which led up to the marvelously ingenious looms of the present day, such as the one above shown, began with the invention of the fly shuttle by John Kay, of Bury, in England, in the year 1733. Before Kay's time the shuttle was shot by hand across and through the warp threads from side to side. In Kay's loom the shuttle was mechanically shot, and with a degree of rapidity marvelous at the time. There has been no radical improvement in the plain hand loom since Kay's time, and his loom forms the basis of all modern power looms.

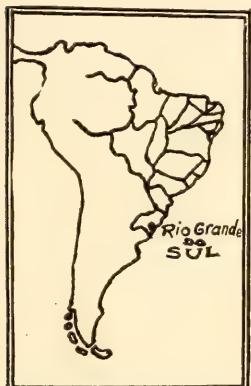
the profits derived therefrom so enormous as to obscure the advantages offered by this more or less out of the way territory. The Province of Santa Cruz, which includes the Argentine part of Patagonia but not Tierra del Fuego, produced for the season of 1908-9, 9,000,000 kilos, 19,800,000 pounds of wool.

The pioneers in the industry in the region of the Strait of Magellan have been mostly Seoteh and Welsh, and these people are rapidly extending their energies over all the available grass lands of the neighborhood, so that it will be but a short while until there are 20,000,000 sheep in this, the most southern territory of the world.



BRAZIL'S NEW PORT^a

WORK is at last fairly under way on the great harbor improvement scheme at Rio Grande do Sul, which for the last fifty years has been one of Brazil's most ardently cherished projects, with the assurance that the task will be completed before the end of 1913. For the realization of this national ambition the southern Republic is indebted to an American engineer, Dr. ELMER LAWRENCE CORTHELL, of New York and Chicago.



Map showing location of Rio Grande do Sul, where improvements at a cost of \$10,000,000 are being made.

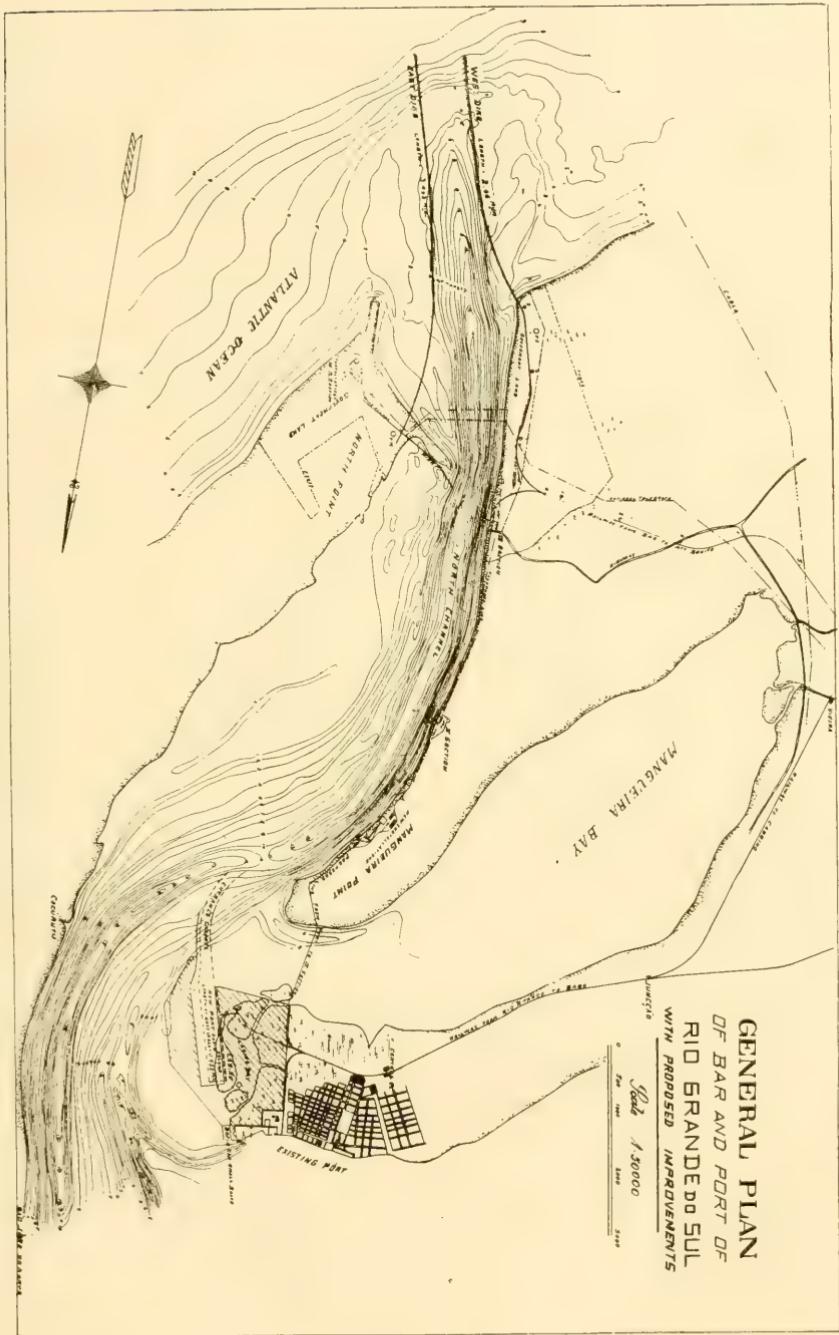
Rio Grande do Sul, a city of 25,000 inhabitants about 900 miles southwest of Rio de Janeiro and near the southern border of the Republic, is admirably situated to become one of the world's great seaports. It is the gateway to an immense region exceedingly rich in natural resources, which includes the State of Rio Grande do Sul, twice the area of New York, with a population of 1,500,000, the State of Santa Catherina, and a large part of Uruguay. From the city radiates the Belgian railroad system extending to the Argentine Republic on the west, Uruguay on the south, and the State of Santa Catherina on the north, and having direct connection with Rio de Janeiro. The rail haul to Rio Grande

do Sul from a large part of Uruguay is several hundred miles shorter than to Montevideo.

The city is situated on a magnificent harbor many miles in extent, perfectly protected and having a minimum depth of 36 feet. Opening into this harbor is Lagoa dos Patos, an inland body of water stretching nearly 200 miles to the northeast, 100 miles of which is 20 to 30 miles wide and 30 feet deep. Leading into it from the west is the Rio Gonçalo, the outlet of another large body of inland water, Lagoa do Mirim. On the Rio Gonçalo near the Lagoa dos Patos is the city of Pelotas, about the size of Rio Grande, while at the head of the Lagoa dos Patos is Porto Alegre, the capital of the State, with 75,000 inhabitants. There is already a 12-foot channel dredged to Pelotas, and the Government is deepening the narrow, tortuous channel to Porto Alegre to 10 feet, so that Rio Grande will soon have improved inland water transportation to a considerable territory.

^a By C. F. Carter.

DIAGRAM SHOWING THE PROPOSED IMPROVEMENTS AT THE PORT OF RIO GRANDE DO SUL, BRAZIL.



All these advantages have appealed strongly to commercial men and over-sea steamship owners. They would like to make Rio Grande do Sul a port of call for all the large steamship lines plying between Europe and Buenos Aires, for its position fairly midway between Santos and the River Plate would make it greatly to the advantage of all lines to stop there, as they could thus come into contact with a prosperous population of 1,500,000.

But, unfortunately, what the polite Brazilians term "our delectable barra," which in plain English is nothing more nor less than a great sand bar, effectually shuts out the commerce that clamors for an entrance. The problem of how to get rid of this bar has absorbed much of the attention of the people of Brazil for years, and it has baffled some of Europe's most distinguished engineers.

When Emperor Dom PEDRO II came to the Centennial Exposition at Philadelphia he devoted a good deal of time to the investigation of harbor improvements. He consulted government engineers, visited the mouth of the Mississippi, where the South Pass jetties were under construction, and tried to persuade Capt. JAMES B. EADS, who was building them, to go to Brazil and solve the problem of the barra of Rio Grande do Sul. Captain Eads could not go, but he recommended Col. W. MILNOR ROBERTS, who was appointed Consulting Engineer of Harbor and Port Works by the Brazilian Government. He went to Brazil, and examined and reported not only upon the Rio Grande barra, but many other projects in Brazil. Unfortunately he died before he could elaborate the plans, but he gave his opinion on the general character of the works, which was that they should be composed of two parallel jetties like those at the mouth of the Mississippi River.

When the Republic succeeded the Empire the new Government took up the Rio Grande do Sul harbor project with even greater enthusiasm than the old. Ever since the Republican Government was established it has been engaged in making preliminary arrangements for the great undertaking. These have consisted mainly in protecting from erosion and movement the concave, or western, bank of Canal do Norte, the outlet channel of the Lagoa dos Patos. The drainage waters coming from an area of 63,000 square miles and entering the lagoa at various points unite in one great volume in Canal do Norte and then pass out to the sea. As the waters issue from the shore line they spread out fanlike over a bar, on which there is a minimum depth of 11 to 18 feet, as ascertained by the annual surveys made since 1883. The bar is composed of sand with a slight admixture of clay. The direction of the navigation channel through this bar varies somewhat from year to year, swinging slowly, like a long pendulum, from southwest to south and southeast and back again, a period of years being occupied generally



DR. ELMER LAWRENCE CORTHELL,

The eminent North American engineer in charge of the construction of the new port works at Rio
Grande do Sul, Brazil.

in the movement. The river, which enters the sea in one solid volume with no subsidiary channels, concentrates the drainage of a great area and sends it out to the sea through this one opening, the discharged waters being comparatively clear, the sediments brought down by the rivers having been deposited in the lagoa at points far distant from the bar.

But in spite of all the plans and all the discussions and all the desultory dredging and construction that have been done the bar continued to be the same barrier to commerce that it always has been. It remained for another centennial exposition—the Louisiana Purchase Exposition at St. Louis in 1904—to again give a Brazilian a chance to bring up the question in the United States. This was



THE CUSTOM-HOUSE AT RIO GRANDE DO SUL, LOOKING TOWARD THE ENTRANCE OF THE PORT.

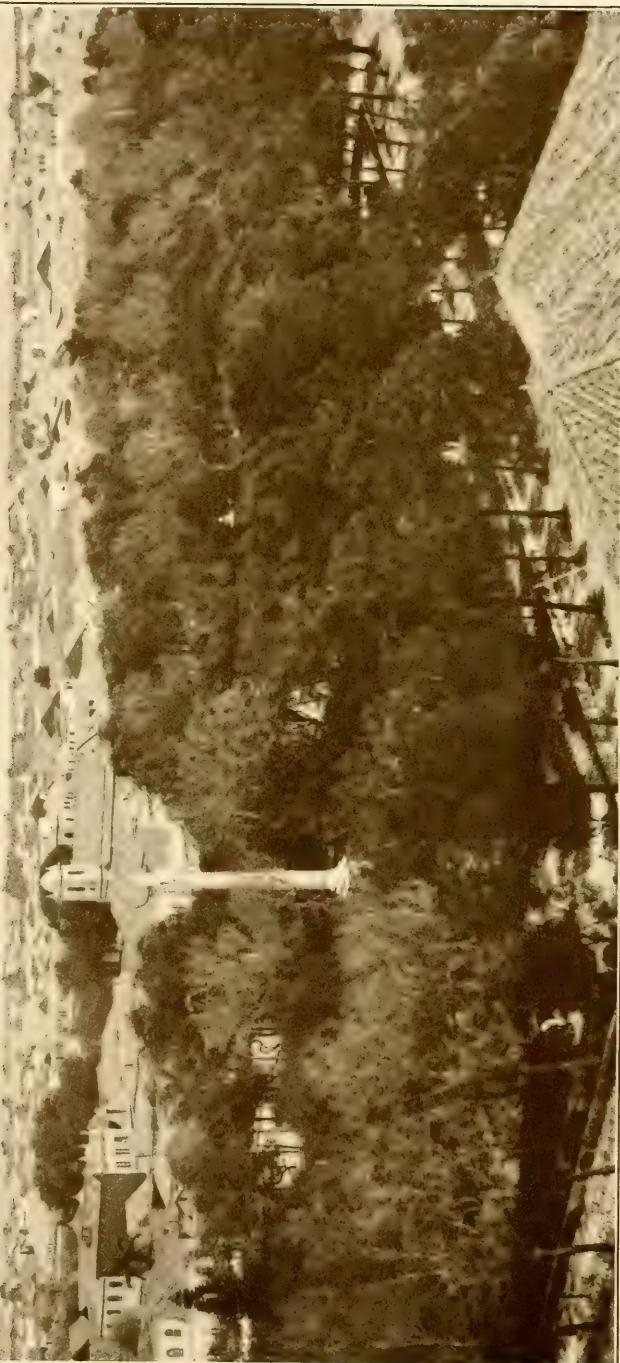
Capt. JOSE CARLOS DE CARVALHO, of the Brazilian army, one of the commissioners to the exposition, who made a personal examination of the Mississippi River from its source at Lake Itasca to the jetties at the mouth of the river. He then brought the subject of the Rio Grande bar to the attention of several business men and contractors at St. Louis and New York, who in January, 1905, sent a party of engineers in a yacht to Brazil to examine into this and other important Brazilian projects. This resulted in the concession from the Federal Government in the name of ELMER LAWRENCE CORTHELL.

The Government of Brazil was very ready to respond to a reasonable and definite proposition to open the bar and to build a deep seaport. Indeed, "readiness" hardly conveys the correct idea of

the enthusiasm with which the proposal was welcomed. Dr. RAMIRO BARCELLOS, who had been a national senator for fourteen years, actually resigned his senatorship in order to devote his undivided attention to promoting the project. The entire delegation in Congress, headed by Senator PINHEIRO MACHADO and Gen. CASSIANO DE NASCIMENTO, the government leader in the Chamber of Deputies, stood together in all details requiring legislative action. Dr. LAURO MULLER, then Minister of Public Works, displayed tireless zeal for the project. The contract for the concession was signed September 12, 1906. The present administration under President NILO PEÇANHA shows quite as much interest in the Rio Grande do Sul project as the preceding.

Dr. ELMER LAWRENCE CORTHELL, the chief engineer, who in the course of a professional career of forty-two years, has been connected with a great variety of enterprises of the first importance, has come to be regarded as the world's foremost authority on river and harbor improvements. Among other things he was engineer in charge of construction on the famous Eads jetties, which deepened the channel in the South Pass of the Mississippi from 9 to more than 30 feet, and chief engineer of the harbor works which increased the depth over the bar at Tampico, Mexico, from 8 to more than 28 feet. He has also built a number of railroads in the United States and five great bridges across the Mississippi, Missouri, and Ohio rivers. He proposed a world's congress of engineers during the World's Columbian Exposition at Chicago, and was chairman of the executive committee that arranged the congress and chairman of the general committee on congresses at that exposition. He represented the United States at three sessions of the International Navigation Congress. He is associate chief engineer of the Cape Cod Ship Canal and a member of a dozen engineering and scientific societies in America and Europe. One of the more recent important harbor improvements of the first magnitude carried out under his direction was at Buenos Aires.

The concession for the harbor improvements at Rio Grande do Sul was first transferred to an American company incorporated under the laws of Maine; but, as all the money to finance the work was raised in France, Doctor CORTHELL, on July 9, 1908, retransferred the concession to the Compagnie Française du Port de Rio Grande do Sul, which organized the Société Générale de Construction for the purpose of constructing the works. The society, in turn, let contracts for the work to a strong French company, comprising Messrs. DAYDE ET PILLE and FOUGEROLLE FRERES ET GROSSELIER, who separately or together have built the ports of Pauillac, Cherbourg, Havre, Bizerta, Madagascar, Guinea, Boca pier, Panama, and many other



RIO GRANDE DO SUL, BRAZIL, WHERE IMPROVEMENTS AMOUNTING TO \$10,000,000 ARE UNDER CONSTRUCTION.

The city, which in 1900 contained about 25,000 inhabitants, is rapidly growing. It will be considerably extended by the filling up of the surrounding low lands during the construction of the port works. There is now a large commerce with foreign countries at this port which it is expected will be largely increased with better facilities for handling it.

important ports, railway bridges, and structural works in various parts of the world.

By the terms of the concession the Brazilian Government is to pay Doctor CORTHELL and his associates 18,000 contos gold (in round numbers \$10,000,000) for creating a channel 10 meters (32.8 feet) deep across the bar. The first payment of 5,400 contos (about \$2,946,000) is to be made when a channel 6 meters (about 19½ feet) deep is secured. Proportionate payments are to be made for each additional meter in depth until the maximum depth of 10 meters is obtained. One-twentieth of the total amount is to be retained by the Government for ten years and one-twentieth for twenty years after the maximum depth has been obtained, the Government paying interest at the rate of 5 per cent. The Government also guarantees interest at 6 per cent on the capital invested during construction. This is effected by levying a 2 per cent gold tax on all imports coming into the State over the barra. The collection of this tax, which already amounts to \$1,000,000, was begun last January.

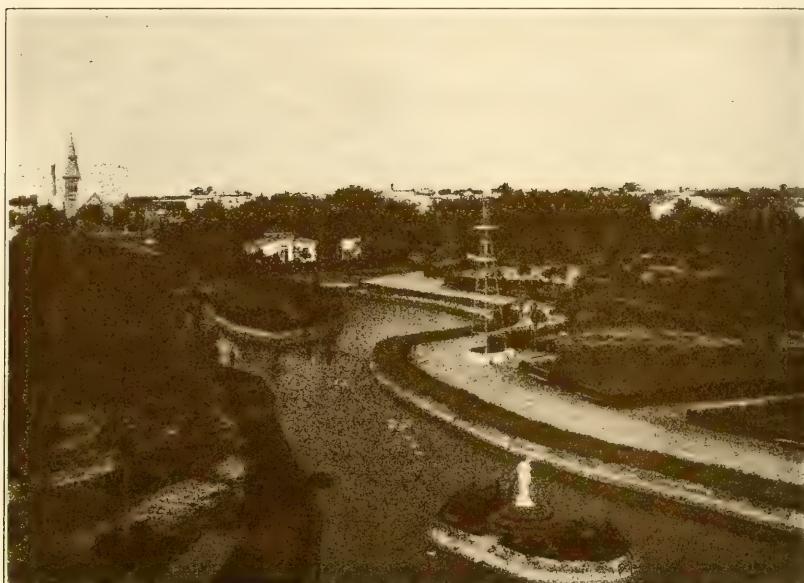
As the channel would be of little commercial value without adequate port facilities, the Government has intrusted the task of supplying them to the concessionaire, the contract running to 1973, and to 1995 if a second section of the port is constructed. These facilities will cost about the same as the bar works.

In a location called "Ladino," named from an island on the borders of Canal do Norte, about 9 miles from the sea ends of the jetties, and immediately alongside of the existing port of Rio Grande, will be built a modern port, with a depth of 34 feet at low water, in front of a masonry quay wall, a little less than a mile in length. On and at the back of this wall, on about 10,000,000 cubic yards of sand filling, dredged from the channel and port area, will be installed electric cranes from 2½ tons capacity to 30 tons, railroad tracks, electric capstans, warehouses, a cold-storage plant, a corral for shipping cattle, a coal deposit operated by electricity, deposit for inflammables, and all other appurtenances required for the rapid and economical handling of cargoes, the warehousing and exporting the products of the country brought down to the port by rail and water, and the imports, foreign and coastwise, needed by the large population. A floating dock of 10,000 tons capacity is also to be provided.

The Belgian Railway Company, the terminal of which is the city of Rio Grande, has leased from the Federal Government more than 900 miles of railroad, and is now engaged in building 600 miles more to connect up and extend its system, which reaches the Argentine Republic on the west and Uruguay on the south, as well as an extension north to the borders of the adjoining State of Santa Catherina, where it will connect with the São Paulo and Rio Grande system, thus

bringing Rio Janeiro and Rio Grande into rail connection within the next two years. The varied products of the State will also reach the port coastwise and by lagoa navigation, which opens up the various rivers for quite a long distance above and west of Port Alegre. The products will be brought to the new port by barges, small steamers, and sailing vessels, and the imports will be distributed in the same manner.

Careful commercial investigations show that the financial results of the operation of the port will be entirely satisfactory. Not only is there sufficient existing commerce, but the present normal growth even under onerous physical conditions, with a bar which makes



TAMANDERE PARK, RIO GRANDE DO SUL.

The introduction of water into the park by means of cemented canals is a departure from the usual features of landscape gardening in most Latin-American parks. The grounds here are laid out symmetrically and kept in good order and are embellished by beautiful statuary and artistic bridges over the canals.

commercial operations difficult, clearly indicates a much larger commerce by the time the works are ready for operation, and a channel exists for vessels drawing 10 meters (32.8 feet). It is well known that increase of facilities increases commerce. It certainly may be expected to so result in this case, where the bars are now up against commerce, and where they are to be let down to allow it to pass freely.

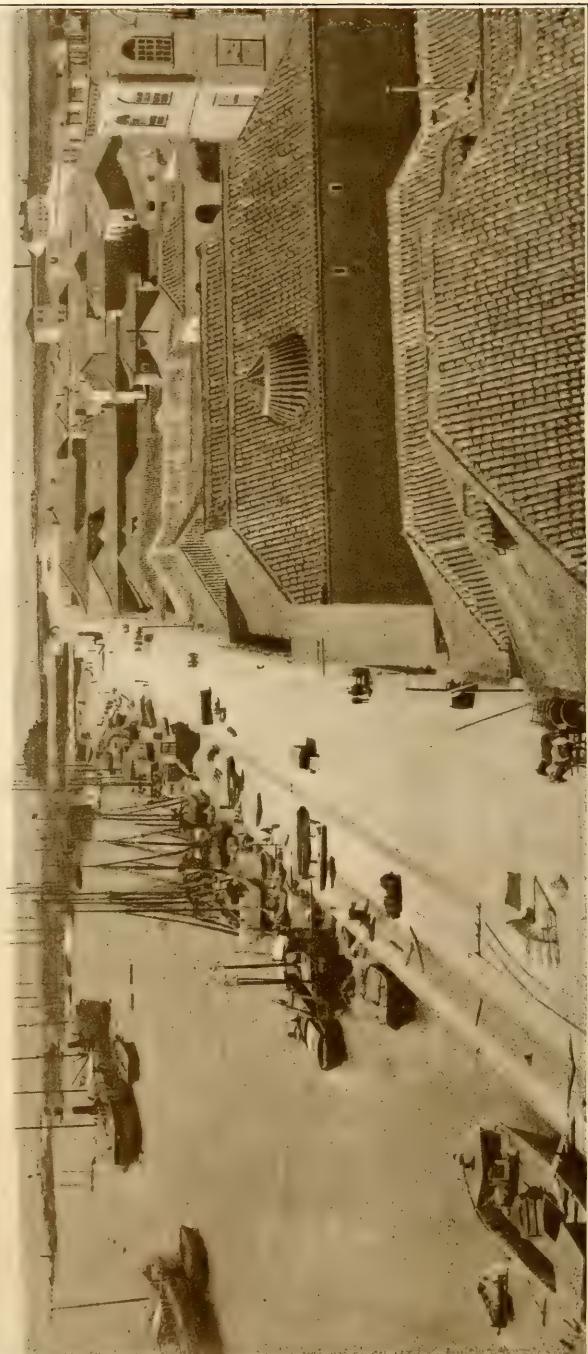
The means by which a deep-water channel is to be cut across the troublesome bar consists mainly of two parallel dikes or jetties extending from the seashore at the mouth of the river out over the bar to a depth of about 31 feet in the sea. The width between these jetties over the bar will be about 2,460 feet, somewhat less than the width

of the hydraulic channel inside the shore lines. They will be built of random rubblestone, with the slopes well protected with large stones weighing from 5 to 10 tons, and the most exposed parts with stone or concrete blocks of 20 to 30 tons weight. The central part of the dikes will be composed of small stone and quarry refuse, to make them less permeable to the flow of water through them. Where necessary, willow fascine mattresses will form the base of the dikes. The dikes will be well above high water, and the height will be increased as they go seaward, the grade running up from the shore to the sea ends, where, on a broad and stable base, will be erected light towers to mark the channel entrance from the sea.

All conditions are very favorable for the projected improvements. The mean tidal range is about 2 feet, and the extreme range is about 8 feet, largely due to the winds. The general direction of the Lagoa dos Patos is northeast and southwest. The prevailing winds are northeast, and tend to push the lagoa waters to their exit at Canal do Norte, lowering the plane of the water surface and even depressing it in the ocean near the coast. Southerly winds have an opposite effect, which is apparent the moment they appear, or even before they appear. Whenever the northeast winds cease to blow, the ocean surface rises and produces immediately a difference of level between the ocean and the lagoa, causing a downward slope into the lagoa and a current into it from the sea.

The currents of Canal do Norte and of the ocean have been carefully measured. The latter averages about 1 mile per hour, flowing southerly along the coast, and the former varies with the drainage conditions, which depend upon the rainfall of about 46 inches per annum, and the winds which raise and lower the water surfaces, the current varying from 2 to 4 miles an hour. The discharge of the waters from the Canal do Norte averages about 175,000 cubic feet per second for the whole year, while 250,000 is not uncommon, and 500,000 may be considered a maximum. This is equal to one-half the flood discharge of the Mississippi River. Inside the bar at Canal do Norte is a deep and wide channel 14 miles long, 33 feet deep and three-quarters of a mile wide. This splendid channel proves the existence of strong persistent currents which may be utilized to deepen the channel through the sea bar to the depths existing in the Canal do Norte.

One important factor in the operation of the works is the existence of the littoral, or shore, currents. These currents in the normal condition of the bar have been sufficient to retard its advance in deep water. The works will increase their velocity and they will sweep away the sands which might otherwise be deposited in front of the works. They will continually act as a planer to shave off the



THE QUAY AT RIO GRANDE DO SUL.

At the extreme end of the wharf is the terminal of the Belgian Railway Company, which has leased more than 900 miles of railroad from the Federal Government and is engaged in building 800 miles more to extend its system, which will reach Argentina and Uruguay and also bring Rio de Janeiro and Rio Grande into rail connection in the next two years.

otherwise protruding bar, exactly as they have done during the last twelve years at the mouth of the Panuco River at Tampico, Mexico, where Doctor CORTHELL designed and built similar works under more difficult physical conditions, and where a channel more than 28 feet deep (24 feet being the maximum required) has been maintained since 1893 without any artificial means. The hydraulic forces at command at Rio Grande are three times as great as at Tampico.

Work was formally begun on December 11, 1907, and since that date the preliminary tasks of getting out and transporting the stone from the quarry in the lagoa, building a railway embankment from the shore end of the west dike toward the quarry at Monte Bonito, and other necessary engineering and construction work have gone



SCENE IN GENERAL TELLES PARK, RIO GRANDE DO SUL.

forward. There are excellent materials available for the works, including a heavy porphyritic granite, good sharp sand, and plenty of good willows for mattress work for the dikes, revetments, and bank protection. Good labor is cheap and abundant. The climate is such that work can be prosecuted during the entire year. A day's work in such a climate amounts to more than it does in some climates where the heat is overpowering and the humidity depressing. By January 5, 1909, a plant valued at more than \$1,250,000 was on the ground and a great deal more machinery was on the way. Extraordinary facilities are required, for in order to do the work so rapidly that it can not be undone by the action of the waves it will be necessary to dump stone into the water at the rate of 3,000 to 4,000 tons a day.

From the quarries at Monte Bonito, 50 miles from the works, equipped with up-to-date drills, air compressors, stone crushers, 10-ton cranes, water reservoirs, and a model camp, a railroad will be built to the water's edge at Pelotas, 12 miles away. The terminal wharf at Pelotas will have four railroad tracks parallel to the river, the front of the wharf being in 13 feet of water. An electric traveler will span all these tracks and move on rails outside of them. It will lift car bodies loaded with 20 tons of stone and move them out to the end of an overhanging arm and lower them to their places on a specially constructed barge which will hold twenty-four of these car bodies, or 480 tons of stone. A tug will tow the barge to a corresponding pier on the east dike, where the car bodies will in the same manner be deposited on corresponding trucks and the cars hauled out to the end of the dike and placed under an immense electric titan manipulated by ten motors. This titan will have an outer arm 125 feet long from the center and swinging around the entire circle. The car body, loaded with its 20 tons of stone as it left the quarry at Monte Bonito, will be tripped at whatever position is desired, the stone being thus deposited in advance, or on either side, or on the slopes of the dike. The same kind of a titan will operate on the west dike to receive the stone coming by rail in the same kind of cars. It is estimated that by water and rail there can be placed in the sea dikes 3,000 tons of stone daily in ten hours' work. The whole amount required for dikes and port is about 4,000,000 tons.

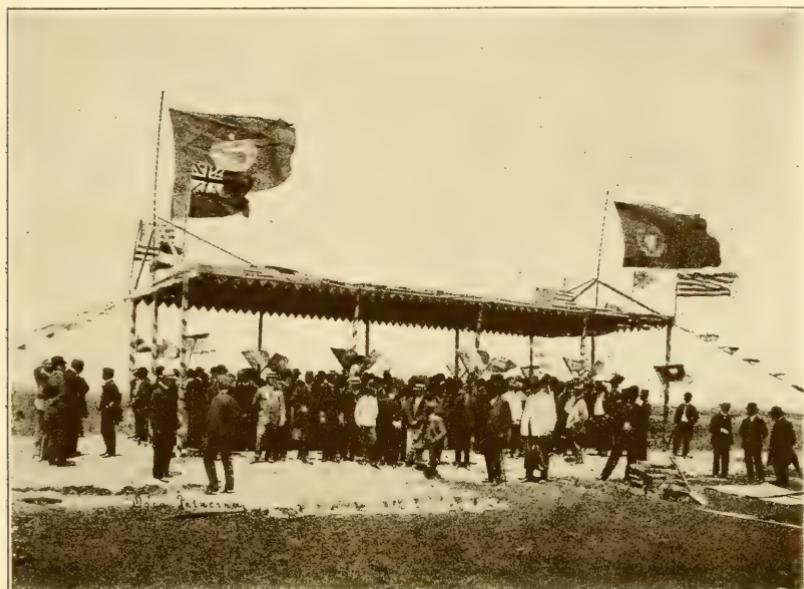
The central installations for the construction of the port works will be located south of Mangueira Bay, and connected with the port grounds by a railroad, and also with the barra tracks by a railroad along the north channel. At this central point will be established the block yard with its sand, cement, and broken stone deposits for making the 20 to 30 ton concrete blocks of the quay wall; also the storehouses, shops of all kinds necessary for such extensive works, piers, wharves, and slipways. The blocks will be towed in block barges to the quay wall and there deposited in their places.

The area of the port inside the revetments is about 800 acres, comprising a basin 754 feet wide and 4,921 feet long. The area at present is water and lowland, which will be raised above the highest tides. The area of the reclaimed land will be 650 acres, the water area of the port, 150 acres. The surrounding revetment will be built of mattress and stonework in the water area and of earth embankment on the land areas.

The material to be dredged from the approach channel and port area, about 10,000,000 cubic yards, will be deposited inside these revetments by means of a suction dredger, which at first will pump the material out of dredging scows, which will be filled by a bucket dredger. Later on the filling will be made direct from the suction dredger, as is so often done in the United States in filling low grounds.

The operation of this great plant will be in charge of a cosmopolitan company of engineers. Besides Doctor CORTHELL, the chief engineer, there is another North American engineer on the works, WALTER CHARNLEY, who has charge of the railroads. JOHN LLOYD JEKEN, resident engineer, is an Englishman. There are two Brazilian engineers, while the majority of the staff is French.

The development of commerce, it is expected, will soon require the construction of the second section of the port, the quay wall of which will be built in the same basin and opposite the quay wall of the first section. The width of the basin will then be 1,150 feet, which will afford room enough for the longest over-sea vessels to maneuver.



THE INAUGURATION OF THE NEW PORT WORKS AT RIO GRANDE DO SUL.

This consisted in laying a monumental stone at the point where the proposed railroad to the quarry at Monte Bonito leaves the line going to the west dike. Brazilian, American, and English flags are seen.

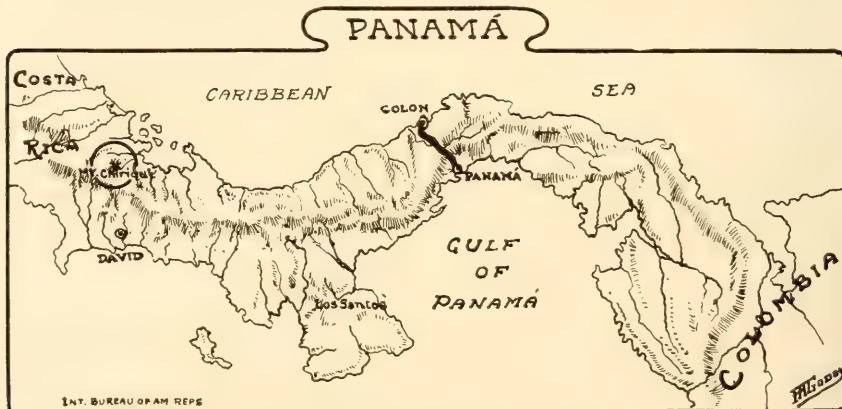
It is proposed to extend the streets of the city into the port and divide the reclaimed lands of the port area into blocks and lots for business houses, manufactories, warehouses, offices, residences, and parks. When the second section is built the area east of the port will also become a part of the city of Rio Grande. The street tramways, which are soon to be electrified, will ramify throughout the port.

A careful study of all the conditions, physical, industrial, and commercial, confirm the general opinion that the removal of the Rio Grande bar and the construction of a modern port in the neighborhood of Canal do Norte will revolutionize southern Brazil and make the port of Rio Grande do Sul one of the most important in South America.



TISINGAL: THE LOST MINE OF PANAMA^a

IT is not improbable that during the dry season of 1910, lasting from January to April, some trace of the once famous mine of "Tisingal" will be found, as by Law Third of January 2, 1909, passed by the National Assembly of Panama, the immense *savannas* and *selvas* of the Pacific slope of Panama are thrown open to acqui-



MAP OF THE REPUBLIC OF PANAMA.

The lost gold mine of Tisingal is supposed to be somewhere within the radius of the circle surrounding Mount Chiriqui.

sition on very favorable terms, and already a number of Americans, especially of the Canal Zone, have taken up land there.

In the westernmost part of Panama bordering on Costa Rica lies the Province of Chiriqui, the richest of the seven provinces constituting the Republic of Panama. Its north coast is washed by the Caribbean Sea, known to the Spanish conquerors as the North Sea,

^aBy Charles Melville Brown.

while the island-dotted Pacific or South Sea washes its southern shores. Twenty miles from the Atlantic side and 40 miles from the Pacific is the highest crater of the "Volcan de Chiriquí" or Chiri-



PANAMANIAN INDIANS IN NATIVE CANOE.

The natives of Panama are very expert in the making of dugout canoes from the trunks of trees. Most of the small vessels which are used to carry fruits and vegetables to the market in the city of Panama are of this class, and even boats large enough to carry animals are made in this manner.¹

qui Volcano, rising nearly 12,000 feet above sea level. Two other craters of lesser height rise one on either side of the main crater; then a sheer drop of several thousand feet of sulphur-coated rock

to the highest signs of vegetation. Below this on the Pacific slopes stretch beautiful rolling *llanos* or steppes, lower and lower, on down to the palm-fringed coast line.

Somewhere on these immense slopes lies the lost mine of the Indians, "Tisingal," known to and worked by the early Spanish settlers, who changed its name to "La Estrella," or Mine of the Star.

During the year 1833-34, in going through the archives at Cartago, Costa Rica, some official documents pertaining to this mine were found, and permission was obtained from the Costa Rican Government for their publication. Shortly thereafter a company was formed in Cartago to send out exploring parties, and although considerable time and money was wasted and several lives lost in an endeavor to locate this mine, no indications of its whereabouts were found.



GROUP OF PANAMANIAN INDIANS FROM THE CHIRIQUI DISTRICT.

They are often suspicious of the white man and are generally averse to being photographed. They become more friendly after learning a little Spanish or English, and anyone conversing with them in those languages can generally disarm their suspicions.

Reprints of some of the documents referred to have come into the hands of the writer, in which is preserved the old style Spanish in which they were originally written during the sixteenth and seventeenth centuries. Translations of these papers have been made and the information contained therein summarized, to which have been added data obtained through a personal acquaintance with the country described. During last year an unsuccessful attempt was made by the writer to ascend the highest crater of the Chiriquí Volcano for the purpose of verifying certain information purported to have been secured in the year 1605 from this point and pertaining to the Tisingal mine. During the dry season of this year a second attempt will probably be made.

Among the documents consulted is one that, literally translated, reads as follows:

Within the limits of the Department of Chiriqui, contiguous to the Republic of Costa Rica, exist places rich in gold, known by the names of Tisingal, Quebrada



CACIQUE, OR CHIEF, OF COASTAL TRIBE OF PANAMANIAN INDIANS.

The origin of these people is uncertain. The pottery found in the graves of their ancestors would indicate a relationship with the ancient Costa Rican peoples, but in their burial customs, in the lack of enduring houses and temples, and in their use of gold, they were like the ancient inhabitants of middle and southern New Granada.

Ancha, Quebrada de Oro, and others quite important. The first of these places was explored some time ago by a Spanish colony, which in the year 1601 founded the city

of Concepcion de la Estrella, near this mine of great wealth. The excessive stinginess of the conquerors reduced the Indians of the locality to the condition of slaves, they being forced by the Spanish to work, mining the gold of the Tisingal. These Indians became tired of the excessive work and bad treatment and became desperate. In the year 1611 they revolted against their oppressors and exterminated them; but other Spaniards at the place of the mutiny again compelled the Indians to resume the working of the mine and made harder for them their state of slavery. This almost eliminated the Indians from this stretch of country.

On the 28th of September, some years after these happenings, the Indians returned, and without pity or consideration, took the life of every foreigner living in the country; and not only this, but carrying stones from distant localities they covered up and destroyed all traces of the workings of the mines, and they also razed all houses

and churches belonging to the Spaniards. The only traces remaining of these ancient buildings to-day are the foundations of the church and a bell belonging to it.

At last the news of the new rebellion reached Cartago in Costa Rica, where immediate preparations were made for revenge. It is known that at the beginning of the year 1710 the Government at Cartago sent 200 men by the way of Boruca and Tuis to San Jose Cabecar, a town to the east about 15 leagues from Concepcion. This expedition took 500 Indians of both sexes prisoners and reduced them to a state of slavery, and as such consigned them to the inhabitants around about Cartago upon their return to that place. These pris-

GOLD EAGLE, WITH HANDS AND FEET, FOUND NEAR DIVALA, CHIRIQUI.

oners and all other Indians they met along the way were massacred shortly thereafter.

From that time all Indians living in the mountains in all directions up to a distance of 70 leagues turned bitter enemies of the foreigners, and up to a few years ago would have nothing to do with the white races. Due to these events all traces of the villages of Turrialba, Tuis, Atirro, San Jose Cabecar, and other places that lay on the route to Concepcion de la Estrella and Tisingal were lost, and the trails of communication with the mines were covered with brush and completely destroyed, so that after forty years in Cartago no knowledge was to be obtained as to the locality of the Estrella, and practically no person living knew or had seen the mines at Tisingal.

Due to the hostility and cruelty of the Indians, together with the dangers of the trails and the unhealthiness of the country, people gradually began to forget about these mines, and whoever spoke of making an expedition for the purpose of discovering these mines was considered to be committing suicide. * * *

The slopes of the Chiriqui volcano are traversed by numerous rivers, in many places not more than a mile apart—wild rushing mountain torrents that form navigable rivers near the coast, many



of which are constantly changing their courses. Along the banks of these rivers the Spaniards found the richest Indian villages. The Indians extracted gold from the sands of many of these rivers and worked it into weird figures representing alligators, frogs, birds,



FULL-BLOODED PANAMANIAN INDIAN BOYS.

They are apt pupils and make good and faithful servants.

turtles, fish, snakes, bells, plates, images, and others, which it was the custom to bury with the owners thereof in the rock-walled tombs in which their dead were interred.

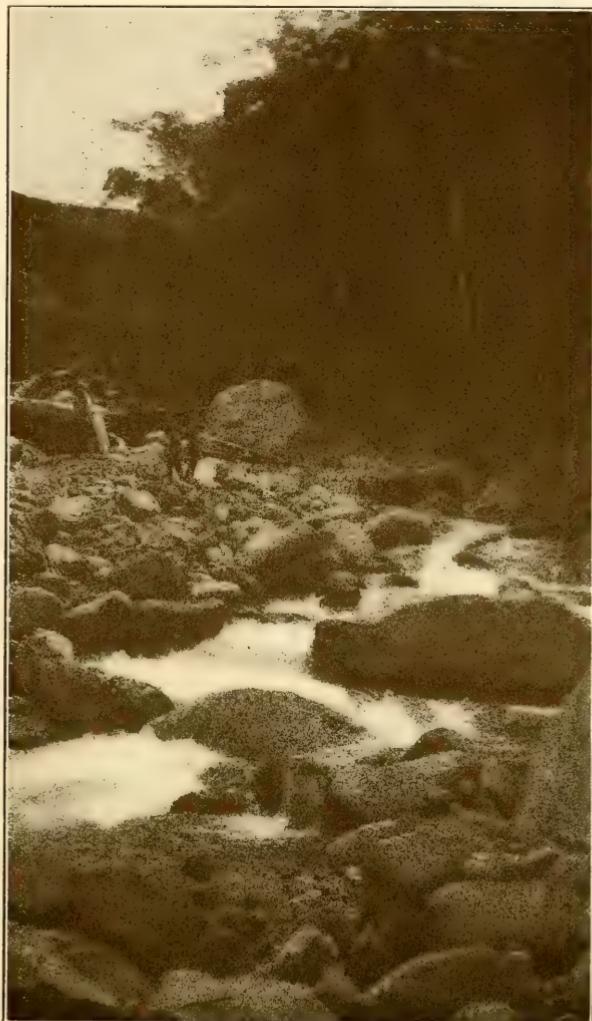
Among the documents referred to are found the records of an expedition that set out from the city of Garci-Munoz in Costa Rica, in the

COLLECTION OF SOLID GOLD ORNAMENTS TAKEN FROM INDIAN GRAVES IN THE PROVINCE OF CHIRQUI, REPRESENTING EAGLES, LITTLE BELLS, PUMAS, TURTLES, FROGS, FANTASTIC IMAGES, ETC.



year 1563, for Quepo, Couto, Boruca, and the valley of Guaymi. An extract from this document literally translated reads as follows:

Going up the Guaymi Valley one arrives at a place called Couto, where much gold has been found, and the natives have it worked into all forms; and on being questioned



GOLD-BEARING MOUNTAIN TORRENT ON PACIFIC SLOPE
OF THE VOLCANO OF CHIRIQUI, TRIBUTARY TO THE
CALDERA RIVER, NEAR BOQUETE.

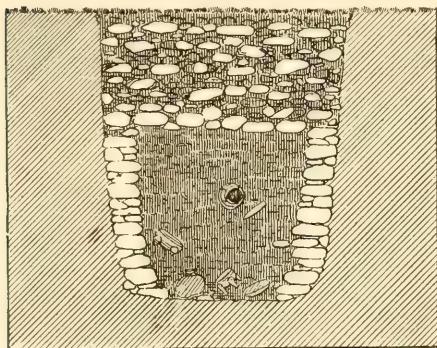
Although, from the quantities of gold used by the early inhabitants of Chiriquí, it is evident that they worked gold mines, considerable of the precious metal was and is still found in the rivers of Panama.

as to where they obtained it they stated that they had gotten it in very big grains from a river four days' journey from that place, in the dominion of an Indian *cacique* called UCARACI. Not one day's march from Couto lies the village of Turucaca, the inhabitants of which stated that they had obtained gold in the same river as the inhabitants

of Coto. The Provinces of Coto and Turacaca lie 50 leagues from the city of Garcí-Munoz at the beginning of the valley of Guaymi, 10 leagues from the South Sea in front of the Golfo Dulce. It is known that following up the Guaymi Valley to the mountains toward the north there are to be found numerous villages such as Quepo, Coto, Boruca, Aci, Uriaba, Xarixaba, Yabo, Duba, Cabara, Barerto, Tabicte, Arabora, Cabangara, Quecabangara. * * *

The following year, 1564, another expedition set out from Cartago, Costa Rica, to explore this same country, and the chronicler, writing of their discoveries, says:

Crossing the Province of Ara and passing the valley of Coaca, we arrived in the Province of Terbi and made our camp in the village of Corcuru, which lies in the valley of the Duy. And the Indians having brought to the leader a great quantity of gold, he sent the slaves to explore, and they brought back such large pieces that the leader himself decided to explore. We then arrived at a river called La Estrella, which is the principal one as to the quantity of gold found.



Courtesy of the U. S. Bureau of Ethnology.

AN ANCIENT OVAL CHIRQUI "GUACA"
OR GRAVE.

The former inhabitants of this district buried their dead in pits, generally oval or rectangular in shape. The oval graves were from 4½ to 6 feet deep and from 3 to 4 feet in diameter. A wall of rounded river stones lined the lower part of the pit, within which the dead were entombed, together with golden figures, pottery, and implements.

* * * from Cartago the expedition returned to the Province of Terbi, to the village of Cururu in the valley of the Duy (Indian name Quequeque); and from there we went to the big river which had already been named *Rio de la Estrella*.

Since the sixteenth century the land bordering the Sixiola River, which lies to the north of the Chiriquí volcano, and which empties into the Caribbean Sea, had been in dispute between the Governments of Costa Rica and that of Panama. At that time it was claimed by both the governor of Costa Rica and the governor of Veraguas. The Province of Chiriquí adjoins Sixiola and formerly formed

part of the Province of Veraguas, now one of the seven Provinces of Panama. After the independence of Panama in 1903, this dispute again arose, due, to a great extent, to changes in the names of many of the rivers of this part of the two countries, some of which still retain their Indian names while others have been renamed. The question was finally submitted to President FALLIERES of France for arbitration, and an entirely new boundary line was traced in accordance with his findings.

The Indians inhabiting the country lying near the border line of Costa Rica and Chiriquí have always been hostile, and in several instances have risen against the whites and massacred them. The Talamanca Indians, who still inhabit these parts, were especially

bellicose, and among the documents referred to is found one that records their subjugation, and which reads as follows:

In October of the year 1601, GONZALO VASQUEZ DE CORONADO, governor of Costa Rica, received orders to pacify the Indians in the Province of Costa Rica, a district



PUMA-SHAPED "METATE" OR MEALING STONE OF THE ANCIENT CHIRIQUIANS.

The office of the mealing stones is considered to have been that of grinding corn, cocoa, and the like. The implement or pestle used in crushing and grinding was usually a cylindrical mass of volcanic rock worked into nearly symmetric shape.

of Guatemala, as far as the borders of the Provinces of Veragua and Panama, and of all the lands that are included between the North and South seas and the valley of the Chiriqui River. The governor opened the way from Cartago to the city of Santiago



CARVED BASALT "METATE" AND CLAY FIGURES FROM CHIRIQUI GRAVES.

Alanje (which still exists) on the borders of the States of Costa Rica and Veragua, subjugating on the way the nations of the Borueas and Cotos, but he did not succeed in crossing the watershed to the North Sea. This undertaking was reserved for Don

JUAN DE OCON Y TRILLO, who succeeded Don GONZALO in the governorship of Costa Rica in the year 1605, and who sent Don DIEGO DE SOJO into the Province of Duy in the valley of Tarire to reduce the inhabitants to submission. He succeeded, and founded the city of Santiago de Talamanca, from which comes the name that designates these lands to-day. He subdued the following tribes: Ateo, Viceita, Terrebe, Cururu, Quequexque, Usabara, Sacaque, Xicagua, Munagua, Cabecera, and Cujerinducagua. In July of the year 1610 these tribes revolted and destroyed the city of Talamanca.

The existence of the "Tisingal" mine has never been doubted, nor is it considered the product of the fertile imagination of the natives of Chiriqui. At Cana, in the Province of Panama, at the present time there is being operated a gold mine formerly worked by the Spaniards. Several years ago while blasting in one of the galleries of the Cana mine an aperture was made into what proved to be the buried remains



DECORATED POTTERY FROM INDIAN GRAVES IN THE PROVINCE OF CHIRIQUÍ.

The earthenware of the ancient inhabitants of this Province represents a very high degree of development in the perfection of its technique, in the high specialization of form, and in the conventional use of a wide range of decorative motives. There is no family of American ware that bears evidence of higher skill in the manipulation of clay or indicates a more subtle appreciation of beauty of form.

of a gold mine worked several centuries ago. Leather buckets, with straps that fit around the forehead and around the shoulders of the mine workers, and instruments of steel were found in a good state of preservation. The mouth of this mine had been so completely hidden that mining operations had been carried on for years almost paralleling the entrance shaft, without the engineers suspecting its proximity. Records of the old Cana mine are in existence, but its exact location had never been fixed before.

Gold can be found in almost all the rivers of Chiriqui. In 1859 there were discovered the first Indian graves, from which were taken gold ornaments, clay pottery and images, stone figures, arrow points,

etc. Since this time there have been found in Chiriquí hundreds of these Indian graves, known to the present day natives by the name of "guacas." The writer himself opened up one grave from which he took 18 pieces of pottery.

The graves found in the district of Bugaba are the richest. It is in this district of Chiriquí that "Tisingal" is supposed to be and undoubtedly is located, as most of the gold-bearing graves are found in this district, and it is known to have been inhabited by a very jealous and warlike tribe whom the Spaniards were never able to permanently subjugate. The Indians were forced to work in the mine by the Spaniards, but finally revolted and killed their taskmasters, as described in the translation already given. It is then they are supposed to have destroyed all traces of the mine.



Courtesy of the U. S. Bureau of Ethnology.

STOOL-SHAPED OBJECT CARVED FROM GRAY, MINUTELY CELLULAR BASALT.

The height is 6 inches and diameter of the top 10 inches. The interior is nearly hollowed out. The openwork of the sides consists of two elaborately carved figures of monkeys, alternating with sections of trellis work. Its use can not be determined, as it shows no sign of wear.

During the dry season of 1909 there was discovered about four days' journey from the present town of Bugaba a "guacal" or burying ground, from which there has been taken over \$25,000 worth of gold up to the present time. This "guacal" is located in the district of Corredor, and as many as 400 natives have been at work in it at one time. Don ANTONIO ANGUILOLA, Governor of Chiriquí, has sent out a party of 20 men in search of other "guacales," and it is not improbable that during the present dry season others will be located.

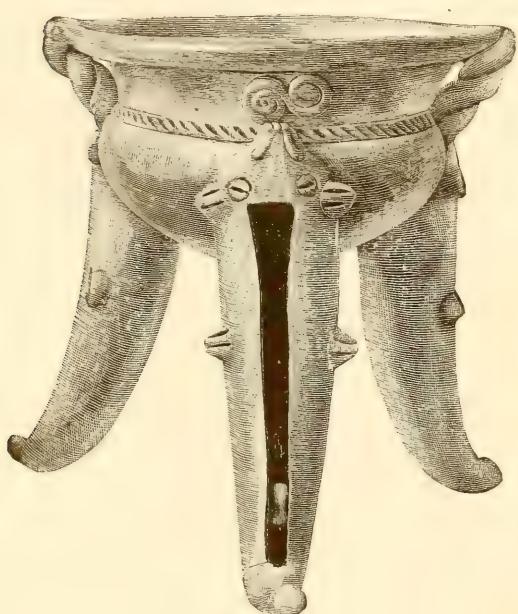
Although it is known that the Indians extracted gold from the rivers, yet it is generally doubted that they worked the placers to any great extent, as no recollection of this kind of working has been preserved among them, whereas they have traditions of the working

of "Tisingal." Undoubtedly they knew how to melt gold, and from their castings found in their graves it is proven that they knew how to separate it from other metals.

Anent the placer workings of the Indians the following translation has been made from the documents first referred to:

In 1587 Don DIEGO DE SOJO, Captain of the Guard of the Governor of Veraguas, set out from Santiago de Veraguas to explore this little-known part of the King's province, and in his report to the Governor of Veraguas he says:

The quantity of gold that abounds here is great and of good karat, as can be seen from the plates of gold the Indians beat out, it not being alloyed with other metals. The rivers abound with gold, besides there being other precious metals in all the ranges of



Courtesy of the U. S. Bureau of Ethnology.

TRIPOD VASE OF GRACEFUL SHAPE AND NEAT FINISH.

This is a representative specimen of the fish-legged group of vessels found in Chiriquí graves. The handles are formed of twisted ropes of clay, and a narrow, ropelike band encircles the lower part of the neck. The eyes, mouth, and fins of the fish forming the supports are represented by means of oblong and round pellets of clay.

PERAFAN DE RIBERA, Governor-General and Captain that he was of Costa Rica—took from the tombs of the dead, which he found one league inland from the coast, such a great quantity of gold as to swell two large chests of the kind in which shoes and nails for the cavalry are brought over from Castile. And being covetous of more treasure he started inland with 60 men he had with him, leaving the two chests buried at the foot of a ceiba tree, well locked and nailed, and started inland in search of the Indian village. But after having traversed hardly a league he was attacked by such a number of natives that some of his companions were killed, he turning and fleeing pursued by the natives to the very waters of the sea; and with difficulty did he embark in his frigate and escape, leaving his heart buried at the foot of the ceiba tree where he had left the chests of gold, and where they remain to this day.

the Province extending over an area of 20 leagues on the shores of Almirante Bay, called thus as it was discovered by Admiral COLON (CHRISTOPHER COLUMBUS); being on the very coast of Veraguas, a distance of some 15 or 20 leagues from the Escudo de Veraguas (a small island near the mouth of the Chiriquí Lagoon on the Atlantic).

But the greatest quantity of gold exists in the hills of Corotapa, on the shores of the same bay near the banks of the *Rio de la Estrella* (River of the Star)—now supposed to be the Changuinola River), a prodigious river and the richest in the world, whose sands are of gold; defended and guarded by a bellicose nation that lives along its banks at its mouth at the place known as Horobaros.

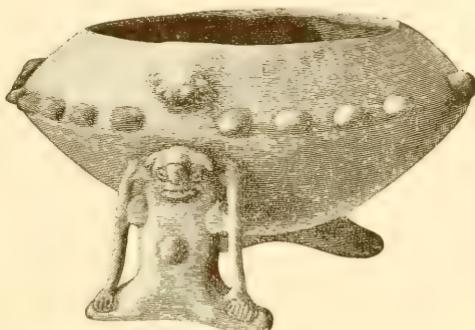
* * *

And the Indians extract the gold with calabashes in very large grains, and a *cacique* of the same town named Ucani works it into the said pieces. * * *

From these same hills Captain MUÑOZ, Sergeant-Major of Don

The ceiba tree grows to a great height and lives for several hundred years. Whether any of the associates of the brave captain ever returned in after years and recovered his captain's treasure unknown to the historian, is not known. There are hundreds of ceiba trees on the shores of Almirante Bay at the present day, and doubtless many of them were there at the time Captain MUÑOZ buried his chests.

In the year 1860 the American cruiser *Brooklyn* arrived at Bocas del Toro, in the Province of Bocas del Toro, formerly a part of Chiriquí, with a scientific expedition for the purpose of studying the Isthmus of Panama. In the report of this expedition, made by a Doctor EVANS, it is stated that the mineral riches that exist in the



Courtesy of the U. S. Bureau of Ethnology.

LARGE CUP OF TERRA COTTA SUPPORTED BY TWO GROTESQUE FIGURES.

This is another example of the excellent ware of the old inhabitants of Chiriquí. Two rudely modeled, semi-human figures are affixed to the under surface of the bowl, supporting it with their backs. The periphery of the body of the vessel is encircled by a number of nodes and noded projections, representing the heads, tails, and spines of two crablike animals.

Doctor EVANS, it is stated that the mineral riches that exist in the parts explored by him are superior to those of California and Oregon. This report was presented to the Government at Washington at the outbreak of hostilities between the North and South, and no further explorations were made at the time.

A document of later date found in Cartago, Costa Rica, relating to "Tisingal," reads as follows:

In the year 1865 the Indians known by the name of "Blancos," belonging to the Republic of Costa Rica, conspired against the foreigners and killed almost all of them in that locality. A person named RAMONDO ROVIRA, of the place called Caldera (in the Province of Chiriquí), lived during that year with an Indian woman belonging to the Blancos, and she tried to save his life when the trouble came. To that end she brought him up to the Volcan de Chiriquí, passing through Tisingal. ROVIRA saw and touched with his own hands the remaining bell of the city of Concepcion; he saw the



Courtesy of the U. S. Bureau of Ethnology.

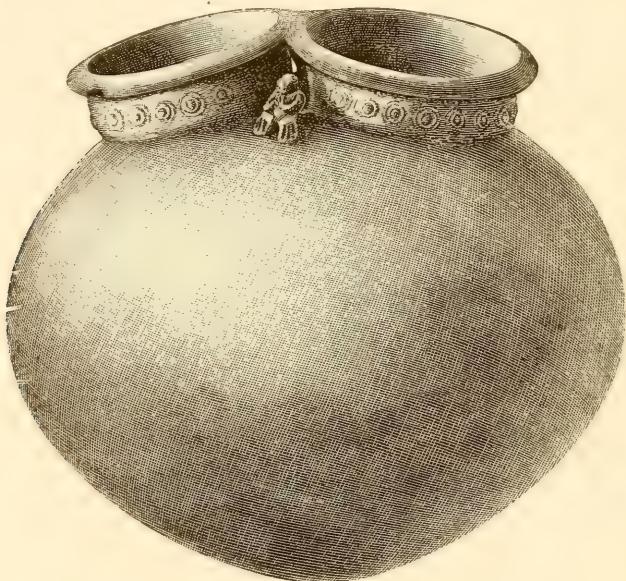
SMALL RED BOTTLE WITH ORNAMENTAL BANDS OF PLAIN AND SCALLOPED LINES.

This belongs to the lost color group of earthenware. A bright red color was used as a ground tint, while the actual patterns were worked out in a pigment or fluid now totally lost, but which has left traces of its former existence through its effect upon the ground colors.

remains of the foundation of the church and he also saw masses of gold of which his guide and saviour allowed him to take but 1 pound.

Continuing, the same document reads:

NICODEMUS RIOS and JOSE SANTAMARIA knew the route to Tisingal, as many times they used to go to the locality and come back with gold in small quantities, for the purpose of not attracting attention, which gold they sold in David. CARMEN SANTAMARIA of Caldera was completely ruined financially in 1868 by the revolution, his house being burned and his farms destroyed, and he was compelled to leave his place. After remaining four months in the mountains he was able to rebuild his house, buy furniture and cattle and jewelry for his wife with the gold everybody supposed he had obtained from the Tisingal mines. And it is well known that he stated publicly that one day he went up to the mine and with a *machete* detached a few pieces of gold from a block which he stated was so large that ten men could not lift it.



Courtesy of the U. S. Bureau of Ethnology.

LARGE TERRA-COTTA VASE WITH TWO MOUTHS AND NEATLY DECORATED NECKS.

This is a superb specimen of the unpainted ware found in the graves of the ancient Chiriquians. The shape has a refinement of line rarely attained in native American work. Its symmetry suggests the use of the wheel, but close examination fails to detect a trace of mechanical appliance save that left by the polishing stone.

It is a well-known fact that the half-Indian natives of Chiriqui, knowing the whereabouts of a rich "guacal," prefer to work it alone and to sell the gold found only in such quantities as their needs may require. They are suspicious of the white man, this suspicion and distrust being inbred in them and handed down in tradition from their ancestors, who in truth had cause to hate that race. A hunting and exploring party that recently returned from the vicinity of Buenos Aires and Boruca, in the heart of the Indian country to the west of David, reported that although they were not openly attacked by the Indians yet they were conscious of being constantly

watched; that food was scarcely obtainable, and that on several occasions they found the water of the springs muddied, apparently but a few minutes before their arrival. If this report be true, and there is every reason to believe that it is, inasmuch as it is but a repetition of former ones of a similar nature, then it is quite evident that the party were not cognizant of the customs, likings, and language of the natives with whom they had to deal. Many of the Indians understand Spanish, and one understanding this language sufficiently can usually disarm their suspicions.

David, which is spoken of in one of the foregoing translations, is the capital of Chiriquí and is a town of about 6,000 inhabitants.



Courtesy of the U. S. Bureau of Ethnology.

VASE DECORATED WITH HIGHLY CONVENTIONAL LIFE FORMS.

Many of the globular vases of this character are very handsome. The frond-like motive in the arched panels is treated in a manner to make it pretty certain that a reptilian form is intended. The polished ground is red; over this the surface was painted black and then the lost color was employed to work out the design. The coiled figures were produced by drawing the lines in the lost color. The interspaces were then roughly gone over with the same pigment in such a way as to leave the figures inclosed with rather uneven black borders.

The town lies on a broad plain sloping gently toward the coast line about 15 miles away, and directly at the base of the Chiriquí volcano. Trails and cart roads lead away in every direction, and 25 miles to the west toward Costa Rica lies the town of Bugaba, in the district of Bugaba already mentioned. The Corregidor "guacal" lies farther to the westward some four days' journey on foot through virgin forests, almost impassable except during the dry season.

On November 25 of 1907, there was published in the Spanish section of "*The Star and Herald*" of Panama, an account of the discovery of a bell which is supposed to mark the site of the former Spanish settlement of *Nuestra Senora de la Concepcion de la Estrella*, which was burned by the Indians in a burst of desperation caused by their ill treatment at the hands of the Spaniards.

A party of *zarzadadores* and rubber gatherers had set out from the neighborhood of David and had traveled slowly toward the northwest for thirty days over the trail known as that of "*Potrero del Volcan*."



Courtesy of the U. S. Bureau of Ethnology.

LARGE CHIRIQUI VASE WITH RED AND BLACK DECORATIONS, NOW IN THE NATIONAL MUSEUM AT WASHINGTON, DISTRICT OF COLUMBIA.

Unlike the other wares of Chiriquí, the polychrome group, of which this vase is a good specimen, has a bright salmon-red paste and the slip proper is a delicate shade of the same color. The designs are in three colors—black, a strong red, and a fine gray purple—which, in combination with the bright reddish ground, give a very rich effect.

One evening on making a clearing for camp one of the party broke his *machete* in two against some hard object which gave forth a metallic sound. On investigation it was found to be a bronze bell. No further traces were found in the neighborhood, and the bell was abandoned where found due to its great weight and the superstition of the natives.

In the Sixth Annual Report of the Bureau of Ethnology of the Smithsonian Institution, for the years 1884-85, there appears a report by WILLIAM H. HOLMES on the "Ancient Art of the Province of Chiriqui," a most exhaustive study of the ancient graves, pottery, images of gold, copper, clay, and stone at the present time being found in Chiriqui, and in which numerous references are given bearing on this subject. In his chapter on the gold and copper ornaments of the ancient Chiriquians Mr. Holmes says:



Courtesy of the U. S. Bureau of Ethnology.

DEVICES OF THE DECORATED ZONE OF LARGE CHIRIQUI VASE SHOWN IN THE PRECEDING ILLUSTRATION.

The designs are executed with great skill in red and black colors and include two highly conventional figures, probably of reptilian origin. The oval faces are placed on opposite sides, taking the positions usually occupied by modeled heads. Each face is supplemented by a pair of arms which terminate in curiously conventional hands, and the two caudal appendages are placed midway between the faces.

The inhabitants of the Isthmus at the time of the discovery were rich in objects, chiefly ornaments, of this metal, and expeditions sent out under BALBOA, PIZARRO, and others plundered the natives without mercy. When the Indian village of Darien was captured by Balboa (1510) he obtained "plates of gold, such as they hang on their breasts and other parts, and other things, all of them amounting to ten thousand pesos of fine gold." From an expedition to Nicaragua the same adventurers brought back to Panama the value of "112,524 pieces of eight of low gold, and 145 in pearls." Early

Spanish-American history abounds in stories of this kind. Among others we read that COLUMBUS found the natives along the Atlantic coast of Chiriqui and Veragua so rich in objects of gold that he named the district *Castillo de Oro*. It is said that the illusory stories of an *El Dorado* somewhere within the continent of South America arose from



Courtesy of the U. S. Bureau of Ethnology.

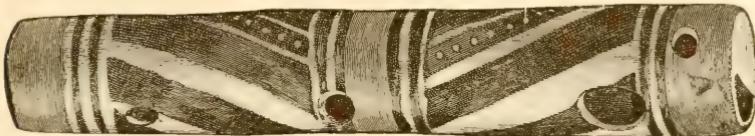
VASE WITH FUNNEL-SHAPED MOUTH AND SQUARE BODY, SUPPORTED BY TWO GROTESQUE FIGURES AND DECORATED WITH FIGURES OF ALLIGATORS AND MONKEYS.

This illustrates to good advantage both the skill and the strange fancy of the archaic potters of Panama. The openings in the heads of the figures recall the well-known whistling vases of South America.

the lavish use of gold ornaments by the natives whom the Spaniards encountered, and that Costa Rica gets its name from the same circumstance.

All of which only goes to prove that the Indians of this coast had some principal source of supply; and while it is probable that some of this gold came from the river beds, yet historians agree that the greater portion of it was in all probability quartz mined.

Odd inscriptions and decorations are found carved on volcanic bowlders in many parts of Chiriqui, and these inscriptions, according



Courtesy of the U. S. Bureau of Ethnology.

TUBULAR CHIRIQUI MUSICAL INSTRUMENT OF POTTERY.

By opening and closing the various openings a series of eight shrill notes can be produced. Many instruments, consisting of rattles, drums, and whistles of various sizes and shapes, have been found in the graves of these ancient people.

to the Indians, indicate the burying grounds of the *caciques*. Many of these decorations appear on the pottery found in the graves, and in the ethnological report referred to are classified. It is to be doubted

that the key to the deciphering of these decorations will ever be found, and it is also improbable that they refer to the source of wealth of the Indians.

The "guacales" are usually found by prodding in the ground with the point of a machete. From 1 to 2 feet under the surface is found a large flat slab, under which in turn are found many stones from the river bottom, then some 4 feet farther down another slab. At the head and foot are found two "pilones" or upright rectangular stones, and in the intervening space is found the pottery. The gold ornaments are usually found in the bottom of the grave, arranged as



Courtesy of the U. S. Bureau of Ethnology.

BIRD-SHAPED WHISTLE OF LOST COLOR WARE.

This is supposed to represent a hawk or eagle. It is elaborately finished in semigeometric devices in red and black, and produces a series of three notes.

though they had been on the breast of the body at the time of burial. Sometimes the ornaments are found in one of the "cantaros" or little drinking jars, and in several graves recently opened it was found

under the second slab. A few years since an Englishman in Boquete opened a grave from which he took over \$2,000 worth of bullion.

The pure-blooded Indians of the Province look with displeasure on this desecration of the tombs of their ancestors, and refuse to be employed in the work of excavation, but the "cholos" and "mestizos" are ever ready to offer their services, and are constantly exploring the country to the west of David in search of the "guacales."

Gold-bearing copper ore has been found in many districts in Chiriqui, especially in that of Bugaba, in which "Tisingal" is in all probability located, the analysis of which has shown 15 per cent copper bearing 2 per cent gold.

The Panamanian Government is at the present time planning the construction of a railroad from David in Chiriqui to the city of Panama, which, when built, will greatly open up this part of the country and make it more accessible. The Indians of Chiriqui will give away before the advance of civilization, and the earth will give up another of her treasures so well hidden for centuries by nature's barriers aided by the avenging hand of the vanquished American.



RECEPTION OF SEÑOR BORDA AS MINISTER FROM COLOMBIA. : : : :

THE BULLETIN welcomes the new Minister from Colombia, Dr. FRANCISCO DE P. BORDA, who was received by Mr. TAFT, the President of the Republic, on January 25, 1910, at 2.30 p. m., at the White House, with the simple ceremonies customary in this country. In his capacity as Diplomatic Representative of one of the countries of the International Union of American Republics, Doctor BORDA will occupy his proper place in the Governing Board of the International Bureau.

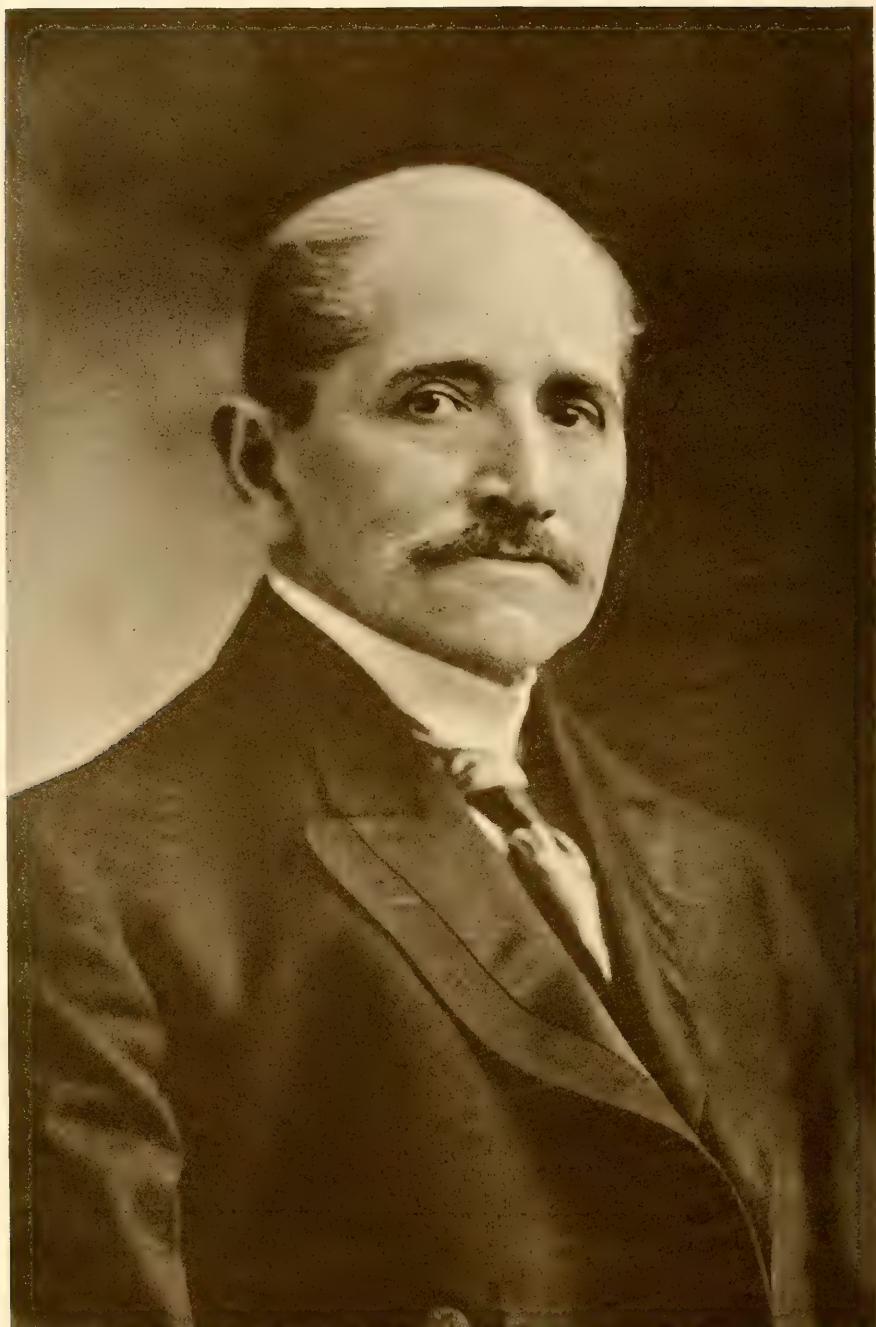
Doctor BORDA has rendered many important and creditable services to his country, inasmuch as he has been a diplomat, Senator, Member of the House of Representatives, a modern and enlightened educator, and a distinguished writer. He completed his studies in Europe and—while still very young—came to the United States, where he had the opportunity to meet President LINCOLN and Secretaries SEWARD and STANTON. At Bogota he is regarded as the dean of the National University and is very popular among the students. He has written innumerable articles, books, and pamphlets, his most important work being a book on territorial rights and boundary questions in South America.

When Doctor BORDA delivered the letters of recall of his distinguished predecessor, Don ENRIQUE CORTÉS, and the credentials which accredit him as Envoy Extraordinary and Minister Plenipotentiary of Colombia, he made the following speech:

Mr. PRESIDENT: Having been from earliest manhood an admirer of this great Republic, and of that spirit of fairness and justice which the foresight of the founders set up as the immutable basis for her strength and grandeur, I could but regard as a privilege my having been selected by the President of the Republic of Colombia to bear witness, by continuing the representation of my country before the Government of which you are the eminent leader, to the high esteem in which it holds the friendly feelings of the people of the United States.

I take pleasure in stating that serious motives and weighty hopes, arising from the lofty spirit of conciliation evidenced by your Government, and from the noted wisdom of your Congress, and even from the very preeminence of the United States, captivate at present the minds of thinking men and the good will of the Colombian people.

The ties that link together the peoples on this hemisphere; the geographical exigencies; the natural and necessary harmony of the rights and interests bound to coop-



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SEÑOR DON FRANCISCO DE P. BORDA,

Envoy Extraordinary and Minister Plenipotentiary of the Republic of Colombia to the United States.

erate in the development of interoceanic waterways—on whose behalf so much solicitude was bestowed by our forefathers and which so deeply affect the commercial, political, and international life, together with the future of our two Americas—urge to the framing, through uniformity of sentiments and ideas, of one single judicial conscience throughout the continent; and lead further, more and more every day, to the conviction that our relations should be carefully maintained on the plane of that mutual respect and of that perfect equity in the interpretation of justice which the enlightenment of modern States points out as being the ethical and judicial foundation of the international community.

In order to gratify this noble and shared ambition, I will exert myself toward the accomplishment of the commendable aims entertained both by yourself and by the President of Colombia; I shall endeavor, moreover, to secure the cordial cooperation of your illustrious Government, and to earn for myself the distinction of your personal consideration, which it is my goal to deserve.

On placing in your hands the letters of recall of my distinguished predecessor, Mr. CORTÉS, as well as the credentials investing me with the character of Envoy Extraordinary and Minister Plenipotentiary of Colombia before the Government of the United States, and on setting forth the warm sentiments of the President of my country toward yourself, allow me to present through your high medium, and in the name of the Colombian people, a greeting of good will and admiration to the people of the United States.

President TAFT replied as follows:

Mr. MINISTER: I am much gratified by the cordial expressions of the sentiments which have inspired the Government of the Republic of Colombia in continuing through you its diplomatic representation at this capital, and of the convictions and aspirations which have led you to accept the high mission of carrying out the purposes of your Government, and exerting your personal efforts to maintain and strengthen the good relations of the two countries, and to serve as the exponent of the friendly feelings of your countrymen toward the United States.

Those sentiments are wholly reciprocal on the part of the Government and people of the United States, and have existed without change for nearly a century since the time when the founders of your historical Republic achieved independence among the first of the Latin-American countries, and when the United States was foremost in recognizing the accession of the Republic of Colombia to the great family of American Commonwealths. Apart from the community of political institutions founded on the broad principle of popular self-government, which brings our Republic into close sympathy with all of Latin-America, there are the special considerations to which you advert that make the relations of the United States and Colombia singularly intimate, and call for the ripest judgment, the most amicable feelings, and the broadest statesmanship in so dealing with them as to insure their perpetuity and constant development for all time to come.

In all that may tend to the realization of this high aim and to the benefit of the mutual interests of the two countries, I promise you our earnest cooperation as sincerely as I confidently look for your cooperation and that of the nation you have been chosen to represent.

In accepting from your hands the letter you present accrediting you in the character of Envoy Extraordinary and Minister Plenipotentiary of the Republic of Colombia near the Government of the United States of America, at the same time accepting the letter recalling your eminent predecessor from that high office, I extend to you a warm personal greeting, bespeaking for you a no less assured place in the esteem of this Government and of my countrymen than was deservedly attained by the retiring minister; and I beg you to convey to your Government the message of good will for Colombia and her people which it is my happy privilege to express in the name of the people of the United States.

LARDNER GIBBON'S EXPLORATIONS IN SOUTH AMERICA

ON January 10, 1910, at his home in Holmesburg, Pennsylvania, died LARDNER GIBBON, formerly a lieutenant in the United States Navy, at the ripe age of 89 years and 5 months. The brief notice of his death published in the newspapers failed to recall to the busy world the recollection of a man who nearly sixty years ago performed a most remarkable feat in exploration. A Philadelphia paper, in recording his death, said of him:

Lieutenant GIBBON was born in Philadelphia August 13, 1820, and was appointed midshipman when about 15 years of age. His most notable work was an expedition which he conducted in the early fifties from the coast of Peru across the Andes and down the Madeira and Amazon rivers. On this trip he traveled about 2,000 miles in a canoe. The Government published a book written and illustrated by Lieutenant GIBBON describing this expedition.

He was the first to suggest the building of a railroad around the falls of the Madeira River for the purpose of opening up a highway from Bolivia to the Atlantic coast. Several futile attempts were made to carry out this project, a notable one being that of the COLLINS BROTHERS, of Philadelphia, in 1878. The railroad is now being built by the Governments of Brazil and Bolivia. Lieutenant GIBBON resigned from the navy in the late fifties, and during the civil war served in the Navy Department of the Confederate States.

He married his second cousin, ALICE SHEPARD, of Newbern, North Carolina, who died seven years ago. Since the civil war he has lived a life of great retirement. Lieutenant GIBBON was the son of Dr. JOHN H. and CATHARINE LARDNER GIBBON.

These facts are in the main correct, but they only briefly tell the story so well and fully told in the second volume of the government publication called "Executive Document No. 53 of the first session of the Thirty-third Congress, published in 1854."

LARDNER GIBBON was appointed a midshipman on December 22, 1837. He was then 17 years 4 months and 9 days old. He was assigned to the West Indian Squadron on January 23, 1838, and was regularly warranted in October of that year. He served on the *St. Louis* from 1839 to 1842. In 1842 and 1843 he attended the naval school in Philadelphia, stood his examinations, and was warranted a passed midshipman on July 12, 1843. He served successively on a receiving ship at Norfolk, Virginia, on the *On-ka-hy-e*, on the *Boston*, and at the Naval Observatory. In 1846 he was again at sea, on the *Cumberland*, of the Home Squadron. He was

detached from the *Cumberland* on August 23, 1848, and three months later was again ordered to the Naval Observatory, where he remained until February 15, 1851, when he was ordered on special duty in South America under Lieutenant HERNDON. He was warranted as master on May 9, and promoted to lieutenant on December 5, 1851. On this day Lieutenant GIBBON was far away in Bolivia, on the road south from La Paz to Oruro, at the little post house of Oroma. He had met here a political refugee returning to La Paz from banishment, whose friends had obtained permission for his return. This refugee had wandered into the very territory into which GIBBON was then about to plunge, and was able to impart to the young lieutenant valuable information.

After his return from South America, Lieutenant GIBBON spent several uneventful years in the naval service, and resigned on May 15, 1857, four years before the breaking out of the civil war, in which he took part under the Stars and Bars of the Southern Confederacy.

The one great event of GIBBON's life was that detailed in Executive Document No. 53. This expedition to explore the upper valley of the Amazon was suggested by the officials of the Naval Observatory, and had the approval of President TAYLOR and his Cabinet. It was decided that the command of the expedition should be intrusted to Lieut. WILLIAM LEWIS HERNDON, and that Passed Midshipman GIBBON should accompany him as assistant. HERNDON at this time was attached to the ship *Vandalia* of the Pacific Squadron, and GIBBON was at the Naval Observatory.

In 1850 a communication was directed by the superintendent of the Naval Observatory to Lieutenant HERNDON outlining the plan and stating that orders to explore the valley of the Amazon would be sent by the next mail steamer. This communication reached HERNDON at Valparaiso in August of 1850. The captain of the *Vandalia* detached HERNDON from the ship with instructions to await final orders, the ship being then bound for Hawaii. Owing to the death of President TAYLOR and the consequent change in the Cabinet these orders were delayed. Instructions were sent Lieutenant HERNDON in October, 1850, to proceed to Lima to await further orders.

On April 4, 1851, Midshipman GIBBON arrived at Lima bearing a letter of instructions, dated February 15 of that year, directed to Lieutenant HERNDON by the Hon. W. S. GRAHAM, Secretary of the Navy, in which the purpose and extent of the expedition was fully set out. This purpose in brief was to explore the valley of the Amazon from the headwaters down to Para. The letter said: "This desire extends not only to the present condition of that valley, with regard to the navigability of its streams; to the number and condi-



LIEUT. LARDNER GIBBON, U. S. NAVY, WHO IN 1851 WAS COMMISSIONED, WITH
LIEUT. WILLIAM LEWIS HERNDON, TO EXPLORE THE VALLEY OF THE AMAZON
FROM ITS HEADWATERS DOWN TO PARA, BRAZIL.

This is a photograph of a painting made by a German artist in Leghorn, Italy, in 1857, which is, so far as known, the only picture ever made of the noted explorer.

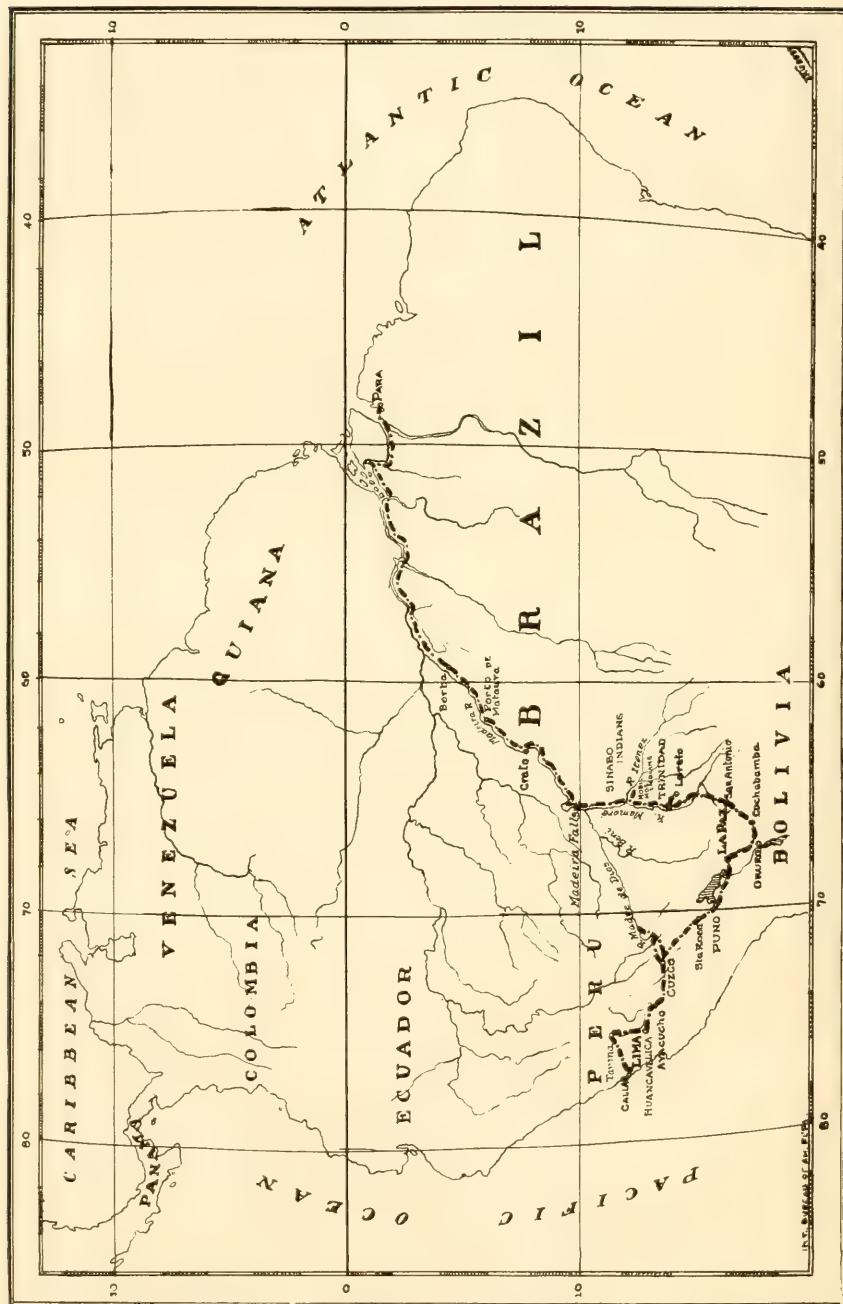
tion, both industrial and social, of its inhabitants, their trade and products; its climate, soil and productions; but also to its capacities for cultivation, and to the character and extent of its undeveloped commercial resources, whether of the field, the forest, the river, or the mine."

Further on the Secretary said: "What inducements are offered by the laws of Peru and Bolivia for emigrants to settle in the eastern provinces of these two Republics, and what is the amount and character of the population already there? What the productions, the value of the trade with them; of what articles does it consist, where manufactured, how introduced, and at what charges upon prime cost? What are the staple productions for which the climate and soil of the valley of the Amazon, in different parts, are adapted? What the state of tillage; of what class are the laborers; the value of a day's work; the yield per acre and per hand of the various staples, such as maté, coca and cocoa, sugar, rice, chincona, hemp, cotton, India rubber, coffee, balsams, drugs, spices, dyes, and ornamental woods; the season for planting and gathering; the price at the place of production, and the principal commercial mart; the mode and means of transportation; with every other item of information that is calculated to interest a nautical and commercial people."

Nothing could better indicate the dense ignorance on the part of the people and Government of the United States sixty years ago as to the great continent of South America than this letter of instruction from the Secretary of the Navy. Two young men, who are authorized "to employ a cook, servant, guide, and interpreter," with only \$5,000 funds, are ordered to explore a territory greater in extent than the whole United States and to report upon its physical characteristics, 15,000 miles of navigable streams alone, its topography, its soil, its products, its industry, its commerce, present and prospective, the social condition of its inhabitants, in fact, give a complete census of the whole country, to reach which from the Pacific side it would be necessary to cross one of the highest and most difficult mountain ranges in the world.

This was an undertaking which later even STANLEY might have declined, though backed by unlimited funds and at the head of a large force. However, these two young naval officers undertook the commission and achieved a degree of success that was truly remarkable.

There were three routes over the mountains from Peru which Lieutenant HERNDON considered practicable in order to cross the mountains into the basin of the Amazon. They were by the valley of Huanuco, by that of Chauchamayo, and by that of the Pauca-tambo to the eastward of Cuzco. His instructions had left him free to choose the route by which he should reach the Amazon territory,



MAP OF ROUTE FOLLOWED BY LIEUT. LARDNER GIBBON, U. S. NAVY, 1851-52, ON HIS EXPLORING EXPEDITION FROM THE PACIFIC TO THE ATLANTIC OCEAN.

and he at once determined that two routes should be covered—he, himself, would go by one and GIBBON by the other. Tarma, about 150 miles northeast of Lima, was selected as the starting point of the expedition. At Tarma it was decided that HERNDON should take the more northern route by way of Huanuco into the country of the Marañon, and that GIBBON should proceed by a more southern route. In this way a larger area of the territory of the Amazon could be covered. The account of HERNDON's expedition is contained in Volume I of the report.

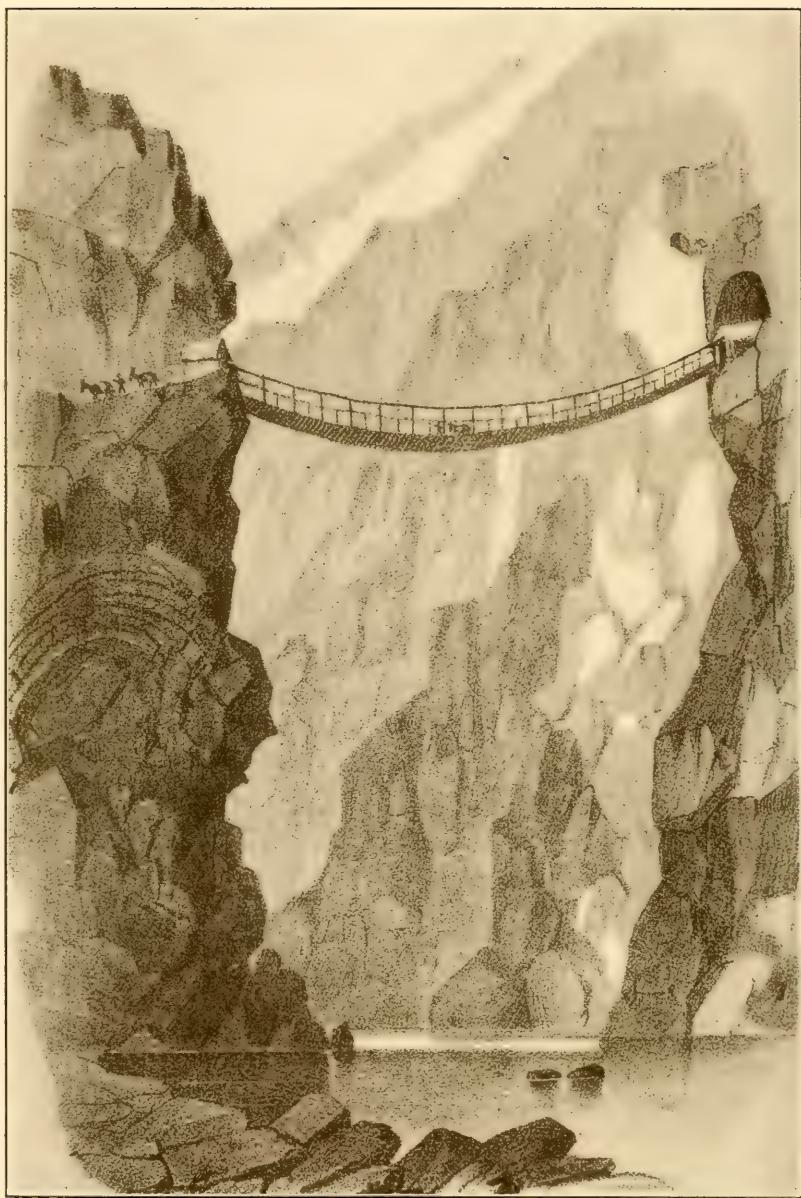
In HERNDON's letter of instructions to GIBBON, dated at Tarma, June 30, 1851, the latter was ordered to Cuzco and to "examine the country to the eastward of that place. It is said that a large and navigable river called the Madre de Dios has its source in the mountains of Caraboya and may be approached at a navigable point by descending the Andes from Cuzco." This is the Paucatambo route and both HERNDON and GIBBON believed that the Madre de Dios was identical with the Purus, which was known to empty into the Amazon. In this, of course, they were mistaken. In case GIBBON found the Madre de Dios route to the Amazon impracticable he was to proceed south and around Lake Titicaca by way of Puno to La Paz in Bolivia and "thence to Cochabamba, and descending the mountains in that neighborhood, embark upon the Mamoré and descend that river and the Madeira to the Amazon."

GIBBON left Tarma on July 9, 1851. The equipage which had been purchased for the expedition, including cotton cloth, hatchets, knives, beads, mirrors, arms, and ammunition, was divided, and GIBBON was given \$1,500 and a share of the instruments. His party consisted of himself, HENRY C. RICHARDS, a native of Virginia in the United States, JOSÉ CASAS, a Peruvian, and a half breed arriero or mule driver.

GIBBON arrived at Cuzco August 23, where he remained until September 16, making preparations to enter the country of the Madre de Dios, which he believed to be the Purus. RICHARDS was taken sick, so that the party was reduced to GIBBON, JOSÉ, and an Indian boy. At Paucatambo a party of twenty-five natives was engaged to accompany the expedition, but all of these to a man, including the Indian boy, backed out from fear of the savage Chunchos to be met with on the road.

Nothing daunted, however, GIBBON continued on his route toward the river and had the good fortune to meet a young North American named LEECHLER, from Philadelphia, a Peruvian bark gatherer who had been so long in the country as to have almost forgotten his English tongue.

LEECHLER accompanied the party in the capacity of guide to the Madre de Dios and back to Cuzco. This attempt to descend this



BRIDGE OVER THE APURIMAC RIVER IN THE ANDES OF PERU.

Sketched in 1852 by Lieut. Lardner Gibbon, U. S. Navy.

river was a failure, owing to the opposition of the Chunchos, although GIBBON was able to gain a large amount of information about the country. It is to be regretted that he was not able to determine the identity of the Madre de Dios in its relation to the Amazon system. It has since been determined to be a tributary of the Madeira system and not the Purus, as HERNDON and GIBBON imagined.

GIBBON returned to Cuzco on October 25. Here he found RICHARDS recovered and able to proceed with the party. Under his instructions he was now to attempt the southern route through Bolivia. Three days later he left Cuzco for Puno on Lake Titicaca. He arrived at Puno on November 10, remained there four days, and proceeded around the lake to La Paz, where he arrived on November 27. From La Paz he took the road to Oruro. He passed to the north of Oruro on December 6, on the way to Cochabamba, at which place he arrived December 10.

GIBBON made a number of explorations in the vicinity of Cochabamba, and spent several months collecting information as to trade, industries, and possibilities of commerce. Here he met and was agreeably entertained by the President of Bolivia, who was in Cochabamba on a visit. On April 30, 1852, he left Cochabamba to descend the eastern slope of the mountains and the Mamoré River to the Madeira and the Amazon.

This is the most interesting part of the journey. He followed the valley of Paracti to Vinchuta, from which point, then a mere trading post but dignified by being under a governor, he was to descend the Chuparé and Mamoré.

At Vinchuta José CASAS left the party to return to his home in the Juja Valley in Peru; this left GIBBON and RICHARDS alone. Through the help of the governor a canoe 40 feet long by 4 feet broad was purchased, and 10 Indians to paddle the same were engaged. On May 25 the party embarked on the Coni Creek, leading into the Chuparé River. This river here is about 300 feet wide and about 12 feet deep. At night the party camped on shore.

On May 29 the canoe passed the mouth of the Chimoré River and the next day entered the Mamoré. Below the junction of the two rivers the Mamoré was 1,200 feet wide and 30 feet deep. On June 1 the canoe arrived at Trinidad de Mojos, then the largest town in the country, with a population of about 3,000 souls. The party was detained at Trinidad nearly three months, so that it was in the latter part of August that they were enabled to continue their descent of the Mamoré. Meanwhile GIBBON made a number of excursions into the surrounding territory and collected a mass of information regarding the country and its products, all of which is set out in his report.

At Trinidad GIBBON's Indians left him to return to their homes, and here he met a Brazilian trader who had ascended the river with

two boats. The trader, who was about to return down the river, agreed to take GIBBOX with him until he could secure his own means of transportation. This he was able to do in a few days at a point called Exaltacion, where he secured a canoe and Indian paddlers who agreed to take him and RICHARDS to Forte do Principe da Beira—in Brazil on the Itenez River—or, if necessary, on to Matto Grosso.

On September 5 they came to the mouth of the Itenez, which was then considered the dividing line between Bolivia and Brazil. The canoe in which they were traveling was unfit to navigate the Madeira, so it was necessary to secure a better one. This could only be done, if at all, at Forte do Principe da Beira, up the Itenez, so it had been determined at Trinidad to go to Beira for the purpose of securing a better boat. The Itenez GIBBON found to be from 400 to 600 yards



From a sketch made in 1852 by Lieut. Lardner Gibbon, United States Navy.

YUCARES INDIANS SHOOTING FISH ON THE MAMORE.

in width and from 6 to 30 feet deep, flowing through a well-wooded country.

At Beira they secured a good boat and crew, and on September 17 were back to the Mamoré and on the way down the river. The distance from the mouth of the Itenez to Beira was about 55 miles southeast. On September 20 the party came to the first rapids of the Mamoré, where the cargo was landed and the boat pulled 300 yards over the rocks. The next day another falls was encountered and the boat had again to be hauled around. This was the Banana-veira Fall, about 20 feet high. Below the fall the river was half a mile wide and about 70 feet deep, with a rapid current. On September 22 they encountered another rapids, where the fall was about 16 feet in a hundred yards. The mouth of the Beni was passed.

Below the Beni the river is called the Madeira. The first falls of the Madeira were close to the junction of the Mamoré and the Beni.

On September 22 they found the river to be 700 yards wide and 105 feet deep. On this day they passed the Miserecordia rapids. The cargo was carried overland and the boat let down by ropes held on the rocks near shore. The next day and the day following other rapids had to be passed. On the 26th there was fair sailing, but on the 27th the party encountered the Trez Irmaos rapids. On September 29 they were again among the rocks, and so again on the 30th. On October 1 they encountered Leotoni Falls, about 16 feet high. Here GIBBON was attacked with severe bilious fever. RICHARDS was at this time just recovering from a like attack. On October 2 they came to San Antonio Falls, which marked the foot of the long



From a sketch made in 1852, by Lieut. Lardner Gibbon, United States Navy.

DESCENDING THE RIBEIRAO FALLS OF THE MADEIRA RIVER IN BRAZIL.

slope down which they had so painfully come. From here it is about 500 miles to the mouth of the Madeira.

On October 6 the party landed at Roscenia de Crato, which was then the frontier outpost of the Brazilian Government on the Madeira River. From here to the mouth of the Itenez the country was a dense forest inhabited only by savage Indians, and more than half the distance was down steep rapids and over falls, where every few miles portages must be undertaken. On October 21 GIBBON and his companion reached the mouth of the Amazon, at which point the report ends.

The story which is here only indicated in outline is a very interesting account of a most dangerous and toilsome journey, but the most remarkable point about the whole report is the mass of information

about the country which it contains. GIBBON seems to have thought it not impossible to carry out to the letter the instructions of the Secretary of the Navy to secure all the data as to the present condition of the country and the people, "their trade and products; its (the country's) climate, soil, and productions; also its capacities for cul-



Sketched in 1852 by Lieut. Lardner Gibbon, United States Navy.

CROSSING THE MOUTH OF THE MADEIRA RIVER, BRAZIL, AT ITS JUNCTION WITH THE AMAZON.

tivation, and the character and extent of its undeveloped commercial resources, whether of the field, the forest, the river, or the mine."

On his map GIBBON draws a line for the proposed road around the falls of the Mamoré and the Madeira. This proposition, as is now well known, is being carried to a successful end in the building of the Madeira-Mamoré Railway.



SUBJECT-MATTER OF CONSULAR REPORTS.

REPORTS RECEIVED TO FEBRUARY 1, 1910.

Title.	Date of report.	Author.
ARGENTINE REPUBLIC.		
Centenary Exhibitions of 1910.....	Nov. 8, 1909	R. M. Bartleman, Consul-General, Buenos Aires.
Tenders for a seaport at "Mar del Plata".....	Nov. 15, 1909	Do.
Tenders for a seaport at mouth of the river "Quequen Grande.".....	Nov. 16, 1909	Do.
Ad referendum contract signed for projected subway system for Buenos Aires.....	Nov. 22, 1909	Do.
Third municipal census of Buenos Aires.....	Nov. 25, 1909	Do.
Completion of Trans-Andine Tunnel.....	Nov. 27, 1909	Do.
<i>Trade notes.</i> —Population of Rosario, La Plata, and Tucuman. Industrial school founded in city of Sante Fe November 23. Dividend declared by the London and River Plate Bank. First of the five sections of La Plata Electric Tramways to be opened January 1, 1910; remaining sections at intervals of three months. Experimental farming on government farm at Patagones, on the Rio Negro. Trade between Argentina and Denmark growing rapidly. New trade school opened at Catamaras.	Dec. 9, 1909	Do.
BRAZIL.		
Concession for cable company in Brazil.....	Nov. 27, 1909	J. J. Slechta, Vice-Consul-General, Rio de Janeiro.
Brazilian customs tariff.....	Nov. 30, 1909	Do.
<i>Brazilian notes.</i> —Sao Paulo coffee shippers expect limit of coffee exports, 9,500,000 bags, will be reached on or before December 12; total entries given to November 26 at Rio and Sao Paulo, and number of bags to be shipped before imposition of 20 per cent additional export tax; also number of bags yet to be disposed of at Sao Paulo; if full amount is shipped, it means absolute stagnation of business in Sao Paulo until end of June, 1910; by January 1 the margin of bills in foreign exchange will be very small in this part of Brazil, and when rubber crop harvested in the north, Brazil must come to aid of financial situation by drawing on gold supply in the Caixa de Conversao. Contract of Government for lease of the northern railroads to the Great Western revised to provide for extension of branch lines. Arrangements by Ministry of Agriculture for Geological Survey to assist the special service organized for investigation and amelioration of conditions in drought regions of northern states. Geological Survey is headed by an American of long Brazilian experience, with two assistants, also Americans. A Bureau of Meteorology and Astronomy has been organized under the Ministry of Agriculture. Gen. Souza Aguiar has sailed for the United States to study the iron situation in regard to establishing such an industry in Brazil; expects to study metallurgical industries there and the possibilities of making arrangements to ship ore to smelters in the United States; also expects to study the rubber situation with a view to scientific planting of rubber trees in the Amazon country. Central Railway of Brazil makes striking reductions in its freight rate on agricultural products.	Dec. 1, 1909	Do.
Transportation Congress and freight rates in Brazil.....	Dec. 14, 1909	Do.
Call for tenders for lease of docks.....	Dec. 15, 1909	Do.
Coffee exports.....	do.....	Do.
Importation and sale of coal in Brazil.....	Dec. 16, 1909	Do.
CHILE.		
Construction of longitudinal railway.....	Oct. 30, 1909	Alfred A. Winslow, consul, Valparaiso.
Funeral expenses and burial control.....	do.....	Do.
Shipping facilities between the Atlantic coast of United States and Europe, and west coast of South America.	Nov. 1, 1909	Do.
Copy of law regulating fees to be collected by Chilean consular officers.	Nov. 5, 1909	Do.
Business conditions and outlook.....	Nov. 15, 1909	Do.

REPORTS RECEIVED TO FEBRUARY 1, 1910—Continued.

Title.	Date of re- port.	Author.
CHILE—continued.		
<i>Trade and industrial notes.</i> —A new 80-ton steam crane installed on the fiscal docks at Valparaiso to replace one destroyed during earthquake in 1906. During 1908, 6,024 immigrants came to Chile, against 8,462 for 1907 and 1,777 for 1906. Immigration for 1909 will fall short of 1908. 226,946 acres of barley sown in Chile in 1908, producing 3,953,971 bushels: the outlook for 1909 is good for an increase. First train to pass from Chile to Argentina through the Trans-Andine tunnel on April 5, 1910. The Chilean Government is about to establish in connection with the navy a school for instruction in wireless telegraphy, in which 20 young men are to be taught free of charge. In 1908 there were 1,142,763 acres of wheat sown in Chile, producing 18,927,462 bushels of a fine quality, against 1,137,435 acres for 1906, which produced 15,714,199 bushels. More acreage was seeded in 1909, with prospects of a good crop. Many varieties of wheat, forage, and industrial plants, potatoes, and corn being tested at the experimental station of the Department of Agriculture.	Nov. 15, 1909	Alfred A. Winslow, consul, Valparaiso.
<i>Trade and industrial notes.</i> —Number of pounds of nitrate consumed in Chile in 1907. Number of acres of land irrigated and number of acres devoted to cultivation of grapes. Number of tons of coal produced in 1907, and value of same. Number of tons of coal imported, and value of same. Number of pounds of sulphuric acid manufactured in Chile in 1907, and amount consumed in that country. Latest estimate of cattle in Chile. Bushels of potatoes and corn produced in Chile during season of 1907-8. Tons of alfalfa harvested from 15,904 acres of land, making yield nearly 4 tons to the acre. Number of pounds of salt produced and consumed in Chile in 1907, and amount imported.	Nov. 22, 1909	Do.
Points to be observed in making out Chilean invoices.....	do.....	Do.
Condition of the nitrate industry.....	Nov. 30, 1909	Do.
Supplemental report of shipping facilities along the coast of Valparaiso.	do.....	Do.
Chilean development.....	Dec. 4, 1909	Do.
Importation and sale of coal in Chile.....	Dec. 12, 1909	Do.
COLOMBIA.		
Importation and sale of coal in the consular district of Barranquilla.	Dec. 7, 1909	C. C. Eberhardt, consul, Barranquilla.
CUBA.		
Importation and sale of coal at Cienfuegos.....	Dec. 14, 1909	Max J. Baehr, Consul, Cienfuegos.
DOMINICAN REPUBLIC.		
Importation and sale of coal in Puerto Plata consular district.	Dec. 11, 1909	A. W. Lithgow, Vice-Consul, Puerto Plata.
ECUADOR.		
Salt monopoly of Ecuador.....	Oct. 28, 1909	H. R. Dietrich, Consul-General, Guayaquil.
Concession granted to Lignite Mining Company to construct a railway from their mines to Quito.	Nov. 19, 1909	R. B. Jones, Vice-Consul-General, Guayaquil.
The Granville Dunne Concession for the exploration, extraction, and exploitation of the petroleum, natural gas, and asphalt deposits and mines in the Republic of Ecuador, for a period of fifty years.	Nov. 20, 1909	Do.
Railroad from Manta to Santa Ana, Ecuador.....	Dec. 7, 1909	Do.
Importation and sale of coal in Ecuador.....	Dec. 11, 1909	Do.
HAITI.		
Importation and sale of coal in Haiti.....	Nov. 30, 1909	John B. Terres, Consul, Port au Prince.
HONDURAS.		
Changes in customs duties of Honduras.....	Dec. 15, 1909	Samuel McClintock, Consul, Tegucigalpa.
MEXICO.		
Cost of living at Veracruz.....	Nov. 30, 1909	Wm. W. Canada, Consul, Veracruz.
Importation and sale of coal in Matamoros consular district.	Dec. 2, 1909	Clarence A. Miller, Consul, Matamoros.
Development of water power (hydro-electric) on the Mayo River for use of mines in eastern Sonora and western Chihuahua, as planned by a power and land company of Denver, Colo.	Dec. 8, 1909	L. J. Keena, Consul, Chihuahua.
Mexicanally owned meat shops in Chihuahua.....	Dec. 10, 1909	Do.

REPORTS RECEIVED TO FEBRUARY 1, 1910—Continued.

Title.	Date of report.	Author.
MEXICO—continued.		
Importation and sale of coal at Acapulco.....	Dec. 11, 1909	Marion Letcher, Consul, Acapulco.
Railway concession in the district of Altar, Sonora.....	Dec. 13, 1909	A. V. Dye, Consul, Nogales.
Americans visiting Mexico, a commercial advantage.....	do.....	G. B. McGoogan, Consul Progreso.
Importation and sale of coal in Yucatan.....	Dec. 14, 1909	Do.
Importation and sale of coal in Lower California.....	do.....	L. N. Sullivan, Consul, La Paz.
Railway construction in Veracruz.....	Dec. 15, 1909	Wm. W. Canada, Consul Veracruz.
New boiler scaling compound.....	Dec. 17, 1909	Do.
Importation and sale of coal in the consular district of Frontera.....	Dec. 19, 1909	A. J. Lespinasse, Consul, Frontera.
Proposed new railway in Veracruz.....	Dec. 21, 1909	Wm. W. Canada, Consul, Veracruz.
New railroad tariff on zinc ore.....	Dec. 24, 1909	L. J. Keena, Consul, Chihuahua.
Cattle shipments from the State of Chihuahua.....	do.....	Do.
Canada's exports to Mexico.....	Dec. 28, 1909	Wm. W. Canada, Consul, Veracruz.
Men's linen collars in Mexico.....	Dec. 29, 1909	Do.
Agricultural opportunities in the State of Colima.....	do.....	A. T. Haeberle, Consul, Manzanillo.
Oil in the State of Tamaulipas.....	Dec. 30, 1909	C. A. Miller, Consul, Matamoros.
Mexican foreign trade.....	do.....	Geo. A. Bucklin, Consul, San Luis Potosi.
Defective packing of merchandise.....	Jan. 3, 1910	Wm. W. Canada, Consul, Veracruz.
Sale of corn to the poor at cost by the state government.....	Jan. 7, 1910	L. J. Keena, Consul, Chihuahua.
Reform school at which agriculture will be taught.....	do.....	Do.
Improved water supply and garbage crematory for the city of Chihuahua.	do.....	Do.
NICARAGUA.		
Importation and sale of coal.....	Nov. 25, 1909	Edwin W. Trimmer, Consul, Cape Gracias á Dios.
Executive decree creating a new issue of paper currency in Nicaragua.	Nov. 27, 1909	Henry Caldera, Vice-Consul, Managua.
PANAMA.		
Importation and sale of coal at ports of Colon, Panama, and Cristobal, Canal Zone.	Dec. 3, 1909	Claude E. Guyant, Vice and Deputy Consul-General Panama.
Importation and sale of coal in Latin America.....	Dec. 10, 1909	Alban G. Snyder, Consul-General, Panama.
PERU.		
Importation and sale of coal in Latin America.....	Dec. 9, 1909	C. Hamilton Jones, Vice and Deputy Consul, Callao.
Steamship service of the Salvador Railway Co. (Limited) between Acajutla and Salina Cruz.	Nov. 24, 1909	Harold D. Clum, Vice-Consul-General, San Salvador.
URUGUAY.		
Exposition of Portuguese products in Montevideo.....	Nov. 26, 1909	F. W. Goding, Consul, Montevideo.
Production and handling of wool in Uruguay.....	Dec. 4, 1909	Do.
Approaching completion of the Eastern Pan-American Railway System.	Dec. 10, 1909	Do.
VENEZUELA.		
Importation and sale of coal in consular district of Puerto Cabello.	Nov. 30, 1909	Herbert R. Wright, Consul, Puerto Cabello.
Telephone and telegraph service.....	Dec. 1, 1909	I. A. Manning, Consul, La Guaira.
Contract of salt mines in Venezuela.....	Dec. 3, 1909	Herbert R. Wright, Consul, Puerto Cabello.
Salt contract in Venezuela.....	Dec. 4, 1909	I. A. Manning, Consul, La Guaira.
Introduction of patent or proprietary medicines into Venezuela.	Dec. 6, 1909	Do.
Railway statistics in Venezuela.....	Dec. 8, 1909	Do.
Tariff changes in Venezuela.....	do.....	Do.
Credits in Venezuela.....	Dec. 9, 1909	Do.
Importation and sale of coal in Venezuela.....	do.....	Do.
Exploration and exploitation of petroleum belt of Venezuela.	Dec. 29, 1909	Do.

ARGENTINE REPUBLIC

RAILWAYS.

There are in the Argentine Republic four broad-gauge (5 feet 6 inches) railroads—the Buenos Aires Great Southern, Buenos Aires Western, Buenos Aires and Pacific, and Central Argentine.

There are three narrow gauge (1 meter) railroads, which are under the same control—Cordoba Central, Cordoba and Rosario, and Cordoba Central Buenos Aires Extension.

There are two railroads of 4 feet 8½ inches, or English gauge—Entre Ríos and Argentine North Eastern.

The railways in the Argentine Republic have been uniformly profitable to a remarkable extent in past years; every year has shown a big increase in the tonnage carried by the Argentine railways, this being in the main due to the increase of the area of land under cultivation and to the marvelous fertility of the soil. During the last six years the increase of tonnage carried has been almost 100 per cent. It may be safely predicted that the area under cultivation in the zone of the railways mentioned will be doubled in the next ten years, since experience shows that agriculture is fast supplanting pasture and driving it farther and farther afield. Any increase of the land under cultivation, and more particularly more intensive farming of that already cultivated, will bring increased traffic to the railroads. Such an increase will be brought about by an increase of the people on the land whose crops have to be moved and whose wants have to be supplied.

AGRICULTURAL EXPERIMENT STATION.

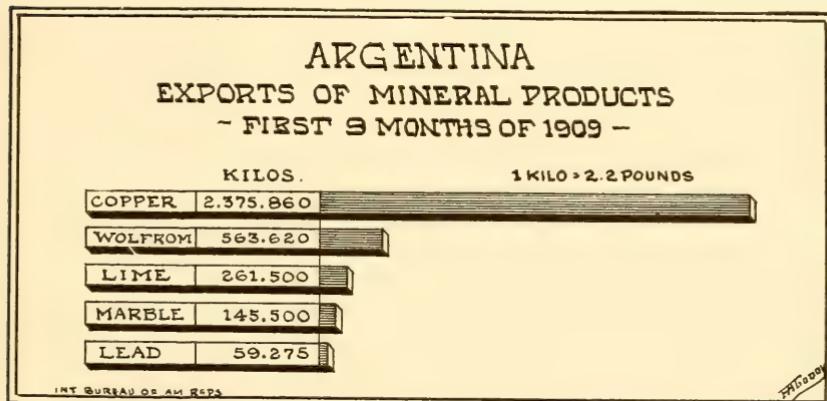
Experimental farming carried on at the Government station at Patagones, on the Rio Negro, at the extreme south of the Province of Buenos Aires, has shown that French wheat will there produce 2,250 pounds per hectare (2.2 acres) and Russian wheat 3,284 pounds per hectare. Great prosperity is reported from the country about the excellent natural harbor of San Blas, which is being developed by private enterprise. Vegetables grow there the year round, pease producing 2,711 pounds per hectare and beans 4,232 pounds per hectare. The abundance and quality of these and other vegetable products have caused great quantities to be exported. The railway line from Bahia Blanca to Carmen de Patagones, which is being rapidly pushed, will do much to develop this rich agricultural and pastoral region.

EXPORTATION AND IMPORTATION OF MINERAL PRODUCTS.

During the first nine months of 1909 mineral products valued at \$584,714 were exported, which, compared with the corresponding period of last year, shows an increase of \$42,663.

The most important exports were copper and wolfram, of which there were exported 2,375,860 kilograms and 563,620 kilograms, respectively. The other principal items of export were lime 261,500, marble 145,500, and lead 59,275 kilograms (kilogram being equivalent to about 2.2 pounds).

Of coal alone there was imported 1,770,075 tons; of coke, 28,520 tons; graphite, 175,477 kilograms; china clay, 1,284 tons; sulphur, 928,543 tons; chalk, 2,247,712 tons; petroleum, 466,805 hectoliters, equivalent to 26.4 gallons; tar, 1,372,062 kilograms; calcium, 5,676,099 kilograms; salt, 2,296,929 kilograms.



STATEMENT SHOWING THE AMOUNT OF EXPORTS OF THE MINERAL PRODUCTS OF ARGENTINA FOR THE FIRST NINE MONTHS OF 1909.

MUNICIPAL BUDGET OF BUENOS AIRES.

The revenues for the coming year are estimated at \$29,728,900 paper currency, or about \$2,492,000 more than was calculated for last year. The ordinary revenue has increased steadily during the last five years: In 1904 it amounted to \$16,598,347; in 1905 it was \$18,388,992; in 1906 it rose to \$19,259,502; and last year it was \$25,488,409, and the extraordinary revenue was \$2,138,212, making together \$27,626,621.

The Intendant proposes to continue his policy of forming parks and playgrounds necessary for the health and well-being of the people. With this end in view he has entered into contracts for the purchase of various properties, using moneys appropriated for that purpose. Moreover the sums devoted to the improvement of the city police, street cleaning service, slaughterhouse, and the municipal band have been materially increased.

PROPOSED WIRELESS COMMUNICATION WITH THE EASTERN HEMISPHERE.

The Argentine Government is considering a plan, in connection with other interested nations, for the establishment of wireless telegraph communication with Europe, Asia, and Africa. The proposed stations will extend from Tierra del Fuego in the southernmost part of the Republic, along the Argentine, Uruguayan, and Brazilian coasts to the Fernando de Noronha, Cape Verde, and Madeira islands to Gibraltar, and from thence to the countries of Europe along the Atlantic and Mediterranean coasts, and from the Mediterranean coast to Asia and northern Africa.



MAP SHOWING THE LINE OF PROPOSED WIRELESS COMMUNICATION [FROM ARGENTINA TO EUROPE, ASIA, AND AFRICA.]

NATIONAL ALFALFA COMPETITION.

The Argentine Government has issued a decree regulating the National Alfalfa Competition. The country is divided into five districts for this purpose. The Provinces of Buenos Aires and Cordoba; Santa Fe and Entre Rios Provinces; the Territory of the Pampa Central and the Province of San Luis, and the remainder of the Republic. The Department of Agriculture is to give gold, silver, and

bronze medals and diplomas for success in alfalfa growing in each district. The samples of alfalfa submitted will be subjected to severe tests of purity and excellence. The Jockey Club of Buenos Aires, the Pacific Railway, and many private individuals and corporations will also give prizes.

PRESIDENTS OF ARGENTINA AND CHILE TO EXCHANGE VISITS.

The President of Chile is to visit Buenos Aires May 25, 1910, upon the occasion of the centennial celebration of Argentine Independence. He will remain there four days, and will be attended by cadets from the Chilean Military Academy, a troop of cavalry, and a battery of artillery. The President of Argentina will visit Santiago September 18 for a stay of four days.

NAVIGATION ON THE RIVER PLATA.

An Argentine firm has purchased the steamer *Jamestown*, which used to run from Washington to Norfolk. It will be renamed the *Colonia* and is destined for the Plata River service.

The *Colonia* is a new steamer, launched at Newport News in 1906. Its hulk is of steel and measures 252 feet, having a registered carrying capacity of 700 tons. The engines furnish 2,136 horsepower, giving the steamer a potential speed of 19 knots an hour.

The *Colonia* has a passenger carrying capacity of 3,000, and is fitted with air-tight compartments which render it unsinkable. All installations are fireproofed with asbestos. It will be the fastest steamer on the river Plata and is calculated to make the crossing to Colonia in something over an hour and a quarter.

THE NATIONAL RIFLE ASSOCIATION OF AMERICA TO COMPETE AT THE BUENOS AIRES EXHIBITION.

The board of directors of the National Rifle Association of America, at its annual meeting held in Washington, District of Columbia, on January 12, accepted an invitation from the Argentine Republic to send a team of riflemen to take part in the competitions of the L'Union International des Federations and Associations Nationales de Tir, whose matches for 1910 will be held at Buenos Aires July 3 to 17 as a feature of the Argentine Republic centennial.

NEW BATTLE SHIPS TO BE BUILT IN THE UNITED STATES.

The Argentine Government has awarded contracts to an American firm for the building of two war ships of the *Dreadnought* type to cost approximately \$22,000,000. Each vessel will be 570 feet long with a displacement of 28,000 tons and a speed of 22 knots, generated by 40,000 horsepower. Twenty-five builders of England, France, Germany, and Italy competed for the contract.

PROPOSED PARCELS-POST CONVENTION WITH BRAZIL.

Negotiations are in progress looking to the celebration of a parcels-post convention with Brazil in accordance with the provisions of the Universal Postal Union. The need of such a service between the two countries is patent, and it is thought arrangements satisfactory to both nations will soon be reached.

MISCELLANEOUS NOTES.

On October 29, 210 miles of the new Rosario-Puerto Belgrano Railway were finished.

The Province of Mendoza had 203,000 inhabitants in September, 1909, 51,000 of whom were in the city of Mendoza. The forthcoming completion of through rail communication with Chile will undoubtedly greatly increase the prosperity of Mendoza, whose wine industries show continued progress.

From January 1 to September 30, 1909, 205,497,122 passengers were carried on the five (Central Argentine, horse; Anglo-Argentine, Lacroze de Buenos Aires, Eléctricos del Sud, Puerto y Ciudad de Buenos Aires, all electric) horse and electric tram-car lines in the city of Buenos Aires, as compared with 185,503,991 during the same period in 1906 and 162,985,646 in 1907. The receipts of all these companies show great increases.

The railway department of the Argentine Government has been authorized to immediately construct the line between Diamante and Crespo, while surveys are to be made for the line from Curuzú Cuatiá to unite with the line from Monte Caseros to Posadas, and for a line from the Port of Paraná to María Grande, for which purposes \$300,000 Argentine gold (\$289,500 United States currency) have been placed at the service of the department.

TARIFF MODIFICATIONS.

In accordance with an executive decree of December 20, 1909, scents, essences, perfumed oils, soaps, paste, and powders, hair dyes and lotions, preparations for the skin, teeth, and nails are now subject to an excise duty of 5 centavos, equivalent to about 2 cents per bottle, retail package or piece, payment of which is to be proved by the application of a stamp of that value to each receptacle or wrapper. In case of imported articles, the stamps have to be affixed before the goods leave the customs.

A previous decree authorizes the free importation of pictures and works of art intended for the Centennial International Exposition to be held at Buenos Aires in 1910. The duty is only remitted on temporary importations, and bond must be given to take the form of a guaranty for the eventual payment of the import duties if the articles are not reexported within a period of two hundred and seventy days from the date of importation.

BOLIVIA

COMMERCE FIRST NINE MONTHS OF 1909.

The exports and imports of the Republic of Bolivia, through the custom-houses of Antofagasta, Arica, La Paz, Uyuni, Oruro, Tarija,

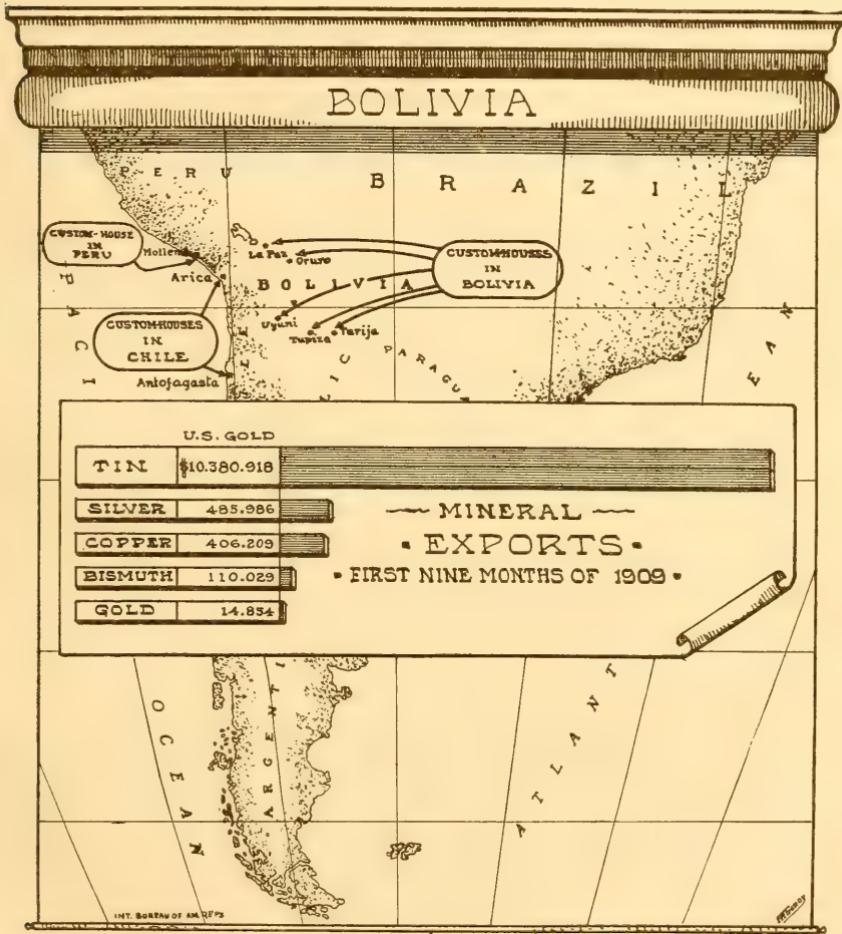


DIAGRAM AND MAP SHOWING THE VALUE OF EXPORTS OF MINERALS FROM BOLIVIA DURING THE FIRST NINE MONTHS OF 1909, AND LOCATION OF CUSTOM-HOUSES IN BOLIVIA, CHILE, AND PERU THROUGH WHICH THEY PASS.

and Tupiza for the first nine months of 1909, were Bs. 28,494,995 (\$11,397,998), and Bs. 24,586,649 (\$9,834,659), respectively, as compared with exports Bs. 26,116,901 (\$10,446,760), and imports Bs.

27,700,758 (\$11,080,303) for the same period of 1908. The exports for the first nine months of 1909 were as follows:

Articles.	Bolivianos.	United States gold.
Tin.....	25,952,296	\$10,380,918
Silver.....	1,214,966	485,936
Copper.....	1,015,523	406,209
Bismuth.....	275,073	110,029
Gold.....	37,136	14,854

During this period exports to the value of Bs. 13,335,373 (\$5,334,149) were made through the port of Antofagasta, Chile, and Bs. 7,094,969 (\$2,837,987) through the custom-house at La Paz, Bolivia.

DRAINAGE AND WATER WORKS AT LA PAZ.

The municipal government of La Paz has been authorized to use the waters of the Milluni River to increase the potable water supply of the city and to furnish a more abundant quantity of water for drainage purposes. It is reported that the city has contracted with the Bolivian Rubber and General Enterprise Company to prepare the plans and complete the work in question.

BASES AND GUARANTEE OF FOREIGN LOAN

On November 10, 1909, the Bolivian Government requested the National Congress to authorize it to negotiate a foreign loan of £1,500,000 for the purpose of using £1,000,000 thereof in establishing a bank for discounts and advances with authority to issue notes, £300,000 for drainage works and water supply in the capitals of the departments, and £35,000, less the cost of placing the loan, for use in the surveys of the railways to Yungas, Chimoré, and Yacuiba or Santa Cruz.

It is proposed to guarantee the loan by pledging the export duties on rubber and ores, the annual receipts from which amount to about \$640,000. The terms must not be lower than those of the Morgan loan, the rate of discount not less than 90 per cent, and the interest and amortization combined not more than 7 per cent.

TELEGRAPH SYSTEM.

The Annual Report of the Director-General of Telegraphs of Bolivia contains the following data: Three thousand and ninety-eight miles of telegraph lines are comprised in the system, of which 2,390 miles are the property of the State. Revenues from the government lines produced \$76,899, which represents an increase of \$13,246 over the previous year.



BRAZIL

BUDGET LAW FOR 1910.

The budget law for 1910, as published in the "Diario Oficial" of December 29, 1909, estimates ordinary receipts at 84,910,529 *milreis* gold and 299,558,400 *milreis* paper. The extraordinary receipts to be applied to special funds are estimated at 19,463,333 *milreis* gold and 13,560,000 *milreis* paper, or a total of \$146,122,449,^a compared with \$140,268,923 in 1908.

The estimated receipts from the principal sources of revenue are as follows: Import duties, \$83,495,000; wharf and light-house dues, \$228,000; 10 per cent duty on goods imported free of duty, \$120,000; 20 per cent of the export duties on Acre rubber, \$5,100,000; internal revenue, \$24,807,553; excise taxes, \$14,419,500; extraordinary revenues, \$4,185,430. Receipts to be applied to the redemption of the paper money are estimated at \$7,037,666; those to be applied to the sinking fund for redemption of railway bonds are estimated at \$980,000; fund for amortization of internal loans, \$912,000; while the proceeds from the tax destined to the port-improvement fund are estimated at \$4,870,000.

The expenditures for 1910 are fixed at 349,455,468 *milreis* paper, and 53,628,370 *milreis* gold, or a total of \$131,650,825, as against \$140,268,923 for the fiscal year 1909.

POSTAL REGULATIONS AND POSTAL SAVINGS BANK.

The "Diario Oficial" of November 24, 1909, contains the text of the new regulations governing the postal service of Brazil, which became effective, with the exception of the provisions concerning the reduction of rates, on January 1, 1910.

The regulations provide that the domestic postage on letters shall be reduced to 100 reis (3 cents) per 15 grams, and on foreign letters to 200 reis (6 cents). When the postage provisions become effective, the foreign postage rates of Brazil will be within the province of the Postal Convention, which specifies that the rate per 15 grams shall be 200 reis (6 cents) in Brazil.

The reorganization act provides for radical changes in the service of the several bureaus, and an increase in the salaries of employees, the greatest increase to go to those who have been in the service for more than ten years. The scale of increase is for more than ten years service 10 per cent; more than twenty years, 20 per cent; more than

^a United States money.

twenty-five years, 30 per cent; and more than thirty years, 40 per cent. About 800 new employees will be employed. Reductions will be made on the present rates of postal money orders, and facilities provided for handling a much greater volume of business than heretofore. The charge for domestic registry is to be reduced to 200 reis (6 cents) for amounts up to 10 milreis (\$3), and 300 reis for amounts up to 15 milreis.

An important provision of the act is the establishing of postal savings banks, with a minimum deposit of 100 reis. Accounts will draw interest at the rate of 4 per cent per annum on deposits of more than one milreis (30 cents) and not exceeding 1,000 milreis (\$300). Single deposits in excess of 1,000 milreis will not be received. The depositor may convert his account into government bonds, or may withdraw his savings account at any time by giving the proper notice. Deposits uncalled for after thirty years, together with accrued interest thereon, revert to the Government. Funds held in deposit may be loaned out at interest to duly authorized banks and other credit institutions.

ELECTRIC LIGHTING IN RIO.

Public electric lighting in Rio de Janeiro is now charged for at the rate of 7.7 cents gold per kilowatt hour for a minimum of 5,000,000 kilowatts, while private lighting is 12 cents gold per kilowatt hour, the electric-light company having recently modified its contract and reduced its schedule. A lower price than the one mentioned will be charged the Government if its consumption exceeds 7,000,000 kilowatts, and a still lower rate if the consumption is in excess of 10,000,000 kilowatts.

The concessions for private and public lighting terminate in 1915 and 1945, respectively.

Charitable and educational institutions receive a reduction of 20 per cent from the schedule price.

The company is obligated to furnish, renew, and keep in repair at its own expense all necessary meters, and must bear the expense of laying of cables, gas pipes, and repairs to the same. The city will receive from the company \$48,000 annually for fiscalization and inspection.

COFFEE EXPORTS FROM SÃO PAULO.

On December 15, 1909, the 20 per cent additional tax on coffee became effective. The coffee exported from the State of São Paulo during the past season, before the additional tax became operative, aggregated 9,500,000 bags. The coffee growers of that State have taken steps to bring about the removal of the 20 per cent tax, and a bill has been introduced into Congress to amend the budget in such a manner as to remove the restriction referred to upon the exports

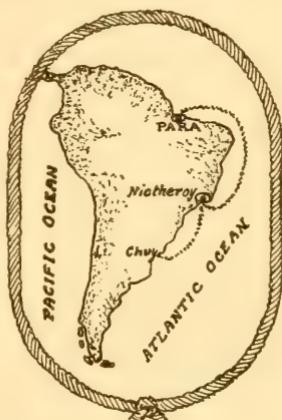
of this product. Unless the market price of coffee should advance considerably, there will be no further exports of that article from Santos until July of the present year.

LAW GOVERNING FOREIGN BANKS.

In a report relating to banking in Brazil, the vice-consul-general at Rio states that the law provides that foreign banks and other corporations, in order to transact business in the Republic, must obtain the authorization of the Department of the Treasury. The application for permission to establish a foreign bank or other corporation must be accompanied by a copy of the by-laws of the institution, the names and addresses of the stockholders, and the amount of stock subscribed by each. One-tenth of the company's capital stock must have been paid in, and two-thirds of same must be owned in Brazil. An American bank in Brazil would include all the features of a credit and banking institution in the United States. Credit paper, as used generally by business concerns and private individuals in the United States, is almost unknown in Brazil. One of the first things a foreigner notes with reference to commercial transactions in Brazil is the great amount of currency carried to and from banks during the business day. Practically no inducements are given by foreign banks to encourage deposits, and in this line there are opportunities for American banks. By including in their functions every legitimate banking operation which experience shows to be feasible, American banks would greatly extend the prestige of American business interests in Brazil.

CABLE CONCESSIONS.

The Brazilian Government has granted a concession for the laying of a coastwise submarine cable and the maintenance of a cable service between Para, in northern Brazil, and Chuy, State of Rio Grande do Sul, in the southern part of the Republic. The concession is for twenty-five years, the concessionaire being obligated to pay to the Government for each word transmitted in international messages 10 *centimes* (2 cents). The Government is entitled to a reduction of 50 per cent from regular tariff rates on all official messages sent by it. The first section of the cable will be laid between Para and Nictheroy, and must be ready for operation within three years, and the laying of the entire line must be completed within nine months thereafter.



MAP SHOWING ROUTE OF PROPOSED SUBMARINE CABLE BETWEEN PARA, NICHEROY, AND CHUY, BRAZIL.

PREFERENTIAL TREATMENT OF CERTAIN IMPORTS FROM UNITED STATES.

The Brazilian Government has renewed for the calendar year 1910 the preferential treatment of certain imports from the United States in force during 1909, and added to the list of articles entitled to the reduction of 20 per cent of the duty cement, dried fruits, desks, corsets, and school furniture. The articles entitled to the reduction of 20 per cent of the duty under the decree of July 1, 1906, are wheat flour, condensed milk, manufactures of india rubber, clocks and watches (now construed to include alarm clocks), inks (not including writing ink), colors and varnishes, typewriters, refrigerators, pianos, scales, and windmills.

ISSUE OF BONDS FOR THE PAYMENT OF BOLIVIAN CLAIMS.

A presidential decree dated December 16, 1909, authorizes the issue of Government bonds to the amount of 1,802,000 *milreis* (approximately \$540,000) for the payment of claims awarded to Bolivia by the Claims Commission created under the terms of the treaty of November 17, 1903. The bonds are of the value of 1,000 *milreis*, bearing 3 per cent interest, payable semiannually.



NAVAL ACADEMY AT VALPARAISO.

From 1856 to 1858, before the founding of the Naval Academy of Chile at Valparaiso, special instruction was given to a body of marine guards aboard the frigate *Chile*, anchored at Valparaiso. In December, 1857, the President was authorized by Congress to expend up to ₩15,000 in the organization and maintenance of a naval academy at Valparaiso, and in April, 1858, the school was inaugurated with an attendance of 26 cadets.

The academy continued in operation without interruption until 1870, when, for the sake of economy, it was discontinued, and in lieu thereof instruction was given aboard the *Esmeralda* to cadets from the military school at Santiago, which instruction, in turn, was discontinued after a period of six years. From 1876 to 1879 no school for naval instruction was maintained by the Government.

In 1891 the Naval Academy was reestablished at Valparaiso, and has remained in successful operation until the present time. In 1892 a special building was erected on the "Hill of the Artillery" for the

use of the academy, which has continued to grow in importance and now occupies a high rank in the naval academies of the Western Hemisphere.

INVOICE REQUIREMENTS.

In accordance with a recent executive decree, invoices for goods shipped to Chilean ports must, when presented for legalization, clearly cover the following points: The name of the seller of the merchandise and the shipping agent, or the person making out the invoice; the name of the consignee and the port of destination; the name of the ship in which the goods were embarked; mark, number, class, and contents of the package; the gross and net weight of the merchandise; the price of each article named in the invoice; and, in case the price given in the invoice does not agree with the market price, the consul is to make a note of that fact at the foot of the document.

IMPORTS OF CHALKS AND CRAYONS IN 1908.

In 1908 Chile imported chalks and crayons valued at \$16,387 and \$2,547, respectively, 50 per cent of the former coming from Germany, 44 per cent from the United Kingdom, 4 per cent from the United States, and 2 per cent from France. Germany supplied about 62 per cent of the crayons brought into the country. School crayons pay a duty of 3.65 cents per kilogram, and artists' crayons 5.5 cents per kilogram.

CHANGE OF TIME.

The Government of Chile decided, beginning with January 1 of the present year, to set its official time exactly five hours behind Greenwich time. This was done for the sake of uniformity and convenience in reckoning time and to simplify comparisons with observations made in accordance with the Greenwich standard.

TARIFF MODIFICATIONS.

In accordance with a recent Chilean law authorizing the gradual reduction of tariff duties on certain articles, it is to be noted that knitted wares of linen or wool and hosiery, corrugated galvanized or sheet iron, and portable houses not exceeding in value \$15,000 are now dutiable at 25 per cent ad valorem.

The duty on boots and shoes of all kinds (except boots and shoes 15 centimeters or less in length, and rubber boots and shoes) is fixed at 45 per cent ad valorem for the first half of 1910, 40 per cent for the second half of that year, and 35 per cent from the first of January, 1911.



COLOMBIA

NEW STEAMSHIP LINE BETWEEN NEW YORK AND COLOMBIAN PORTS.

The United Fruit Company has recently built four steamers for its new service to Jamaica, Colon, and Colombian ports. The *Almirante*, the first steamer built, is of more than 5,000 tons and her companion vessels are the largest vessels to be employed regularly in the service from New York to Jamaica. They are fitted up with modern appointments for first-class passengers, having accommodations for 150 first-cabin passengers. There are suites de luxe, with private baths, and the usual smoking and social rooms and library. Each cabin besides being unusually large and well ventilated for tropical travel, is fitted with an air-cooling system which will add materially to the comfort of the sea voyage.

REGISTRATION OF FOREIGN COMPANIES.

The Government of Colombia requires the registration of foreign companies who do business in the Republic. The law concerning the matter is divided into three parts of considerable length. Part first treats of the obligations imposed by the law, part second is a summary of the different laws concerning the operation of foreign companies, and part third is the text of the laws and decrees relating to the subject and the official explanation thereof. These laws are of great importance to foreign companies now doing business in Colombia, and to new companies that expect to engage in business there.

OUTLOOK FOR FOREIGN LUMBER.

In a recent report of the consul-general of the United States at Bogota on the lumber trade of Colombia, the statement is made that the populous districts of the Republic have sufficient well-wooded lands in their immediate vicinities to supply all local demands. Orders for foreign lumber may occasionally be placed from some of the Colombian river and sea ports, but inland freight rates are so high that they are prohibitive, so far as timber is concerned. The Pacific ports of Buenaventura and Tumaco and the Caribbean ports of Barranquilla, Cartagena, Santa Marta, and Rio Hacha offer the most accessible markets for American lumber and manufactures of wood. At all of these some dock and railway timber, boat flitch, and building material is used. All the Colombian inland rail-

ways are reported to have sufficient supplies of accessible railway timber.

As a general rule American wood does not give satisfaction in the Tropics unless it is protected by creosote or other preservative against insects and decay.

SALE OF COAL AT BARRANQUILLA.

Because of the abundance of wood in the neighborhood of Barranquilla and along the rivers and railway lines in that part of Colombia, but little coal has been used as a fuel up to the present time. No coal mines are known to exist in the neighborhood, and there are no coal deposits exploited in the Republic that are easily accessible to the port of Barranquilla. The Barranquilla Railway and Pier Company import a small quantity of coal annually—less than 1,500 tons, at a cost of about \$9.50 per ton delivered. All the manufacturing industries of the city use wood for fuel. In order for coal to compete with wood in Barranquilla, the price of the former would have to be reduced to about \$4 per ton delivered at the factory.

IMPORTED CRAYONS AND PENCILS.

The deputy consul-general of the United States at Bogota reports that of the white chalk used in Colombia about 5 per cent of the imported material is colored. It comes in boxes containing 100 bars each, 350 boxes to the case, which weighs about 150 pounds. The finer grades of crayons and pencils are imported from the United States, while the coarser ones come from France and Germany.

TARIFF MODIFICATIONS.

An executive decree of October 23, 1909, published in the Official Gazette of the 30th of the same month, provides that carbide of calcium is to be classified for customs purposes in the second class of the tariff, dutiable at the rate of ₡1 per 100 kilograms.



NATURAL RESOURCES.

The natural resources of the Republic of Costa Rica are so varied and numerous, considering the size of the country, as to make their enumeration most difficult, and few other Latin-American countries have so well deserved the careful study of scientists. For ages the

land has been covered with a luxuriant growth of tropical forests, and, in consequence, the virgin subsoil has been overlaid with a thick vegetable mold seldom less than 10 feet in depth. The country contains a variety of tropical and subtropical vegetation on its cultivated lands, virgin forests, and open plains and savannas.

The tropical zone of the Republic on the Atlantic side includes a section of territory from 20 to 22 miles in width covered with a prolific growth of lofty trees. This forest zone, together with the wooded district of the San Juan River, and extending to the borders of Lake Nicaragua, comprises two-thirds of the territory of the Republic. In it are found in abundance the native hard woods of the country, including ironwood, caoba, mahogany, and other cabinet woods, together with campeachy and a number of other trees used in commerce for dyeing and tanning. These valuable timber lands offer exceptional advantages to the lumberman. The San Juan River, with its densely wooded valleys and its numerous navigable tributaries extending into the wooded slopes of the interior of the nation, provides a natural transportation route to the markets of the world.

Costa Rica, appropriately so named by the early Spanish settlers on account of its immense natural wealth, contains, in addition to its virgin forests, broad savannas, and valuable vegetable and fruit products, mineral deposits of great value. Many gold mines were worked by the early Spaniards, and recently great activity has been shown in exploiting new and rich claims, and the indications are that in the near future this branch of industry will be developed to the full extent warranted by the richness of the mineral deposits in the extensive mining zones of the Republic. Much evidence is at hand to show that the native Indians worked, in a crude way, the silver, gold, and copper mines of the country, inasmuch as considerable quantities of these metals are found in the tombs of the aborigines to-day.

The principal products of the mines are gold and silver, although deposits of nickel, iron, and manganese are widely distributed. These deposits offer great opportunities for development and promise rich returns to labor and capital, as do the commercial and agricultural industries of the country.

The laws and constitution of the country are most favorable to the foreigner, according him, with the exception of suffrage, all the rights of a citizen. Foreigners are free to engage in business in the Republic on the same terms as citizens, and may acquire, possess, and dispose of real property without naturalization or restraint.



CUBA

RAILWAY IMPROVEMENTS IN CUBA.

Among the most important railway betterments in Cuba is the recently completed passenger station of the Cuban Railway at Camagüey, an admirable edifice constructed of cement. This line has practically finished its work of substituting native hard-wood cross-ties for those of pine previously used. More than 87 bridges have been replaced by steel structures and other provisional bridges have been repaired and strengthened.

The subsidy of ₡8,000 per kilometer which has been granted by the Government has been of great assistance in the construction of certain branch lines into sparsely settled districts.

The lines from Manzanillo to Bayamo and from Bayamo to Palma Soriano, 250 kilometers in length, traverse the most fertile lands of Cuba and pierce mountains rich in deposits of such minerals as manganese, iron, copper, and other metals whose exploitation is now made possible by these new branches.

HAVANA'S SEWER SYSTEM.

The new Cabanas tunnel, which forms a part of Havana's modern sewer system and through which one of the main drains of the city will pass carrying off the sewage to the sea, has been completed.

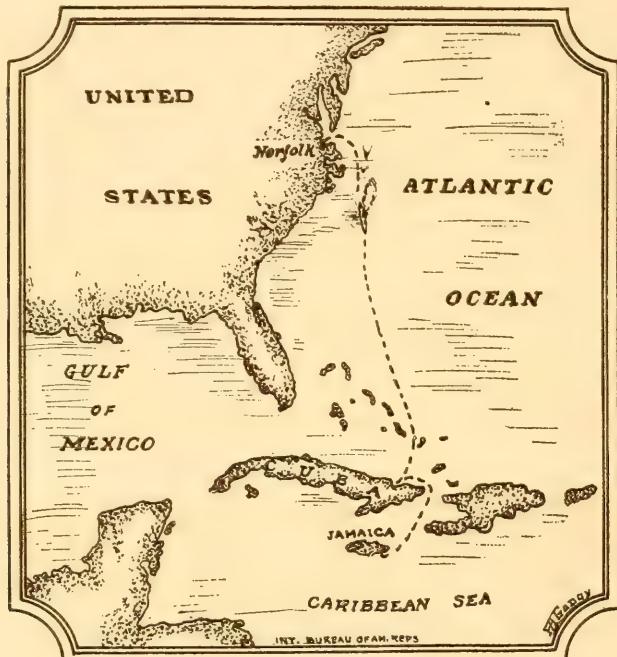
Over a year ago the Cuban Engineering Company undertook to provide Havana with a first-class modern sewer system. Work was begun by the laying of pipes in the suburban districts, the greatest difficulty being encountered in laying the pipe lines for the main drains in the city proper. This difficulty was increased by the fact that the soft spongy rock which forms the foundation of the city in many parts must first be excavated, as the new work is laid on a solid foundation about 20 feet below the surface. A base of concrete is laid in a horizontal frame. Above this wall is built a brick floor, and the walls when vertical will have a concrete shell and brick lining. A short distance above the floor the walls curve over in an arch of concrete construction.

FINANCIAL STATEMENT AT THE CLOSE OF 1909.

On December 31, 1909, the Republic of Cuba had on hand assets to the value of \$6,399,447.50, consisting of cash on hand deposited in the banks of the island \$939,028.79, and cash in the treasury and in the hands of collectors \$5,460,418.81. The liabilities at that time exactly covered the amount mentioned.

NEW STEAMSHIP LINE BETWEEN NORFOLK AND CUBA.

The American Fruit and Steamship Company has established a new line of steamers to ply between Norfolk, Jamaica, and Cuba. This line will carry passengers, mail, and freight. Four steamers have been assigned to this service and the number will be increased as business develops.



MAP SHOWING ROUTE OF A NEW STEAMSHIP LINE TO RUN BETWEEN NORFOLK, VIRGINIA, CUBA, AND JAMAICA.

IMMIGRANTS FROM NORTHERN EUROPE.

Arrangements have been made to bring to Cuba about 100 families from Norway. This is the first systematic effort to import Norwegian emigrants to the island. On arriving at Havana the Government will transport them free of charge to Chaparra, their final destination. They will work in the San Manuel sugar mill and free homes will be provided for them. It is expected that the Cuban Congress will appropriate a considerable sum to be placed at the disposal of the Department of Agriculture to aid immigration.

NEW POSTAGE STAMPS.

The President of Cuba has issued a decree providing for the issue of new postage stamps of the denominations of 8 cents and \$1, respectively. The Director of Communications has fixed the date on which these new stamps will be issued.

INCREASE OF MAIL ORDER BUSINESS WITH FRANCE.

The parcels post convention made with France in 1907 has greatly increased the exports of goods by mail from that country to Cuba, and especially in dress goods and ladies' fine underwear. From February 4, 1907, to May 4, 1908, about 12,000 packages of goods, valued at \$482,000, were shipped by parcels post to the island from France.

TARIFF MODIFICATIONS.

By the Cuban Government decree of November 30 the following articles imported for manufacturing purposes by proprietors of printing and lithographic establishments are exempted from the payment of the surtaxes provided for in the decree of February 1, 1904: Chrome paper (tariff No. 161), bronze powder and leaves (tariff Nos. 69 and 70), varnishes (tariff No. 89), and glazed paper (tariff No. 152). The surtax on chrome paper was 30 per cent of the duty, and on the other articles 25 per cent of the duty. Articles comprised under tariff Nos. 69, 70, and 89, when imported from the United States, are admitted into Cuba at a reduction of 20 per cent of the duty; articles included under tariff Nos. 152 and 161 are admitted from the United States at a reduction of 30 per cent of the duty.

**LAW GOVERNING CUSTOM-HOUSES AND PORTS.**

The President of the Dominican Republic promulgated, on November 20, 1909, a new law concerning custom-houses and ports. The law referred to, which covers every phase of the import and export commerce of the Republic, is divided into 21 chapters and 236 articles. At present the import and export ports of the Dominican Republic are as follows: Santo Domingo, San Pedro de Macoris, Tortuguero de Azua, Samana, Puerto Plata, Monte Cristi, Sanchez, and Barahona.

The new law not only contains rules and regulations referring to exports and imports of merchandise, but also treats of goods in transit through the Republic destined to other nations, the coastwise trade, and merchandise placed in deposit with the intention of reexporting same within a prescribed period of time. The formalities which the captains of vessels, shippers, and consuls should observe are fully set forth in the new law, and the rules governing the lading and unlading of vessels is given in detail. Rules covering consular invoices and manifests are considered, and the examination and dispatch of merchandise, as well as damages to goods in transit, are covered in detail.

The law enters minutely into such subjects as the abandonment of merchandise, the warehousing and depositing of goods, the collection of duties, the inspection and dispatch of vessels, the arrival of ships, shipwrecks, fines and penalties, confiscation of goods, tonnage of vessels, naturalization of ships, the requirements of customs officers in an advisory capacity, the rules governing the conduct of customs officials, and general and transitory rules and regulations relating to this subject.

USE OF RIVERS FOR THE DEVELOPMENT OF POWER.

According to a law promulgated on November 22, 1909, individuals and companies, either foreign or domestic, may, through the Department of Fomento, solicit permits of the President for the use of the water of the rivers of the country, to generate power for industrial and agricultural purposes and to supply water for the use of towns, said permits to be granted whenever the President deems advisable to do so. The applications for water concessions must be accompanied by plans of the works contemplated, a detailed description of the same, and an itemized estimate of their cost.

The Executive is authorized to issue rules and regulations governing the operation of this law. Public works completed in accordance with the provisions of this law may be acquired at any time by the federal or municipal authorities upon the payment of their value, fixed before or after completion, plus a reasonable interest. The material, machinery, and supplies used in the construction of said works may be imported free of federal and municipal duties.

EXTRADITION TREATY WITH THE UNITED STATES.

The extradition treaty, celebrated ad referendum with the United States on June 19, 1909, has been approved by the Senate of the Dominican Republic, and was published in full in the "Gaceta Oficial" of Santo Domingo on November 15 of the said year.

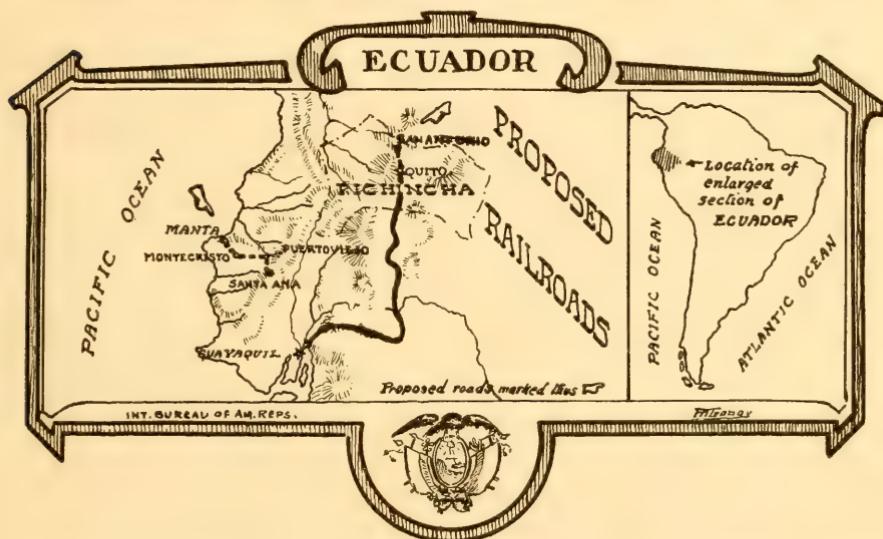


RAILWAY FROM MANTA TO SANTA ANA.

The ad referendum contract made by the Government of Ecuador with PABLO GONZEMBACH for the construction of a railway from Manta to Santa Ana and the building of a wharf at the former place, has been approved, in a slightly modified form, by the Federal Congress, and was duly promulgated by President ALFARO on November 10, 1909. The contract provides that the railway shall start from the

port of Manta, pass through the cities of Montecristi and Portoviejo, and terminate at the city of Santa Ana. The gradients of the line shall not exceed 3 per cent, nor shall the radius of curves be less than 60 meters. It is specified that the cities of Manta, Montecristi, Portoviejo, and Santa Ana shall be provided with railway stations adequate for the proper accommodation of the traffic of the line. The rolling stock shall be of the best quality, and ample for the handling of the freight and passenger traffic of the company. The bridges and trestles are to be solidly constructed of iron, steel, and masonry, and the ties used on the railway must be of durable wood, such as guayacan, mesquit, etc.

In addition to the construction of the railway, the concessionaire agrees to build an iron or concrete wharf, or a wharf constructed of



MAP SHOWING ROUTES OF PROPOSED NEW RAILROADS IN ECUADOR.

both of these materials, 158 meters long by 8 meters wide, having a head 100 meters in length by 16 meters in depth, and to be connected with the railway. Detailed plans of the railway and wharf must be submitted to the Department of Public Works for approval, and the construction of the railway and wharf must be commenced within a year from the approval of the contract by the Congress, and must be concluded, barring unavoidable circumstances, within two years thereafter. A failure to complete the construction within the term specified subjects the concessionaire to a penalty of 5,000 sures (\$2,500) for each month of delay suffered.

The Government guarantees to the concessionaire 6 per cent interest annually and 1 per cent sinking fund, for a period of thirty years, on \$1,000,000, the amount fixed as the value of the railway and

wharf finished and equipped. The railway will issue \$1,000,000 of 6 per cent interest-bearing bonds, secured by a mortgage on the railway and wharf and the equipment and other property pertaining thereto, said bonds to be amortizable within a period of thirty years from the accumulated sinking fund of 1 per cent per annum.

The construction of the railway and wharf will be under the supervision of the Federal Government, and after the wharf is opened for traffic its use shall be obligatory in the freight traffic of Manta, the railway or wharfage company receiving 2.50 sucre (\$.125) per ton wharfage charges on freight laden and unladen at the port of Manta, and 50 centavos (25 cents) a ton on the carrying capacity of vessels anchoring at the wharf.

The concession is for a period of seventy-five years, during which time the company will exploit the railway and the wharf, in accordance with the conditions of the contract, after the expiration of which term the entire property with all its appurtenances shall become the property of the Government.

MODIFICATIONS OF THE LAW GOVERNING THE DEPARTMENT OF JUSTICE.

A legislative decree promulgated by President ALFARO on November 3, 1909, modifies a number of articles of the organic law relating to the judicial power. An important change is made in article 42, providing that: "The attorney who desires to speak in the court room shall so request in due time, and the court shall fix the day and hour on which he may be heard." Article 6 of the new decree, referring to article 47 of the old law, specifies the number of judges that shall sit in the different districts and capitals of the provinces. The decree referring to article 55 of the organic law prescribes the date on which the municipal alcaldes and commercial judges shall be elected. A number of changes of minor importance have been made in articles 60, 110, 133, 141, and 155 of the judicial code.

ABOLITION OF SPECIAL COMMERCIAL COURTS.

The Congress of Ecuador has passed a law abolishing special tribunals or courts of commerce for the adjustment of claims pertaining to mercantile matters. The procedure in mercantile claims will now be the same as in civil cases and will be decided by the same courts. All claims now pending have been transferred for adjustment to the judges and notaries public of the respective cantons.

PROPOSED RAILWAY FROM SAN ANTONIO TO QUITO.

The Congress of Ecuador has granted a concession to the Lignite Mining Company to construct a short railway from the lignite mines or deposits in the parish of San Antonio, Province of Pinchincha, to the city of Quito. According to the terms of the concession, the railway must be completed within two years from October 28, 1909.

DEATH OF DR. CÉSAR BORJA.

On the first of last February the Government of Ecuador sustained a great loss in the death of Dr. CÉSAR BORJA, Minister of Finance and Public Credit, and former Secretary of Foreign Affairs. The deceased had for a long time taken an active part in public life and had been a member of both houses of Congress. Doctor BORJA was 58 years old at the time of his demise, was a physician by profession and a literary man and poet of unusual attainments.



RUBBER GROWING.

In its uncultivated lands on the Atlantic, Guatemala affords the prospective rubber planter every condition necessary for the successful cultivation of this highly profitable plant. These conditions are: Good soil, warm climate, and humidity well distributed throughout the year. Of the conditions absolutely necessary for the cultivation of the rubber tree, humidity is the most essential. In this respect the Atlantic coast of Guatemala shows an annual rainfall of 95 inches, as compared with 80 inches, the average annual rainfall of that part of Sumatra where the best results have been obtained with "Hevea brasiliensis."

Some years ago an ingenious Dutch planter of Sumatra conceived the happy idea of importing from Manila a sowing of hemp seed and interplanting this among his new plantations of rubber, and has obtained a complete success with the scheme. This manila hemp (*Musa textilis*) is one of the many varieties commonly called "Plátano" in Guatemala. The plant is native to the Philippine Islands, the conditions for its successful growing being similar to those of the banana, but it does not bear fruit.

The *Musa textilis* produces three classes of hemp, the first and second classes of which were formerly exclusively exported to Japan and China, where by means of a special and secret process a fabric was made which is known as "crude silk." This fabric is made mainly from manila hemp. The third class comes to the United States to be made up into manila paper.

Naturally the process of converting hemp into silk interested Europe and awakened the desire to imitate and if possible improve the oriental processes. After many unsuccessful attempts in which much money was spent success crowned their labors and they not only imitated but considerably improved upon the oriental process. There is now manufactured in Guatemala a product which is called "artificial silk" which sells at about one-half the price of genuine silk.

The process is, of course, protected by a patent, nevertheless something is known of the process employed. The hemp is dissolved in sulphuric acid forming a pulpy mass. This is then heated to a high temperature, passed across capillary tubes under strong pressure and while so treated cooled with liquid air.

The system of interplanting the rubber trees with *Musa textilis* is calculated to make rubber growing even more profitable. This plant eighteen months after planting attains a growth sufficient to be an admirable shade for the young rubber plants; it has very few roots and thus does not impoverish the soil, and as the fiber is extracted from the trunk the leaves may be cut and allowed to fertilize the soil.

It offers the further advantage of reducing the expenses of rubber planting, for it produces annually a good revenue, covering not only the expenses incurred in planting, but a good share of those of planting and tending of the rubber plants.

CONNECTION WITH MEXICAN RAILWAYS.

A recent letter from the manager of the Guatemalan Central Railway Company to the American minister in Guatemala City, concerning the proposed connection between the Guatemalan railroad system and the Pan-American branch of the railways of Mexico, states that a surveying party is engaged in selecting the preliminary route of the line to the Mexican frontier, and after the report of the survey is received and considered the final route will be selected. A purchasing department of the road is to be established in New York, and all the materials and supplies bought in the United States for the railway will be contracted through this department. Construction work will be commenced during the dry season, and the line will be pushed forward to completion as rapidly as possible.



LEGISLATIVE MEASURES.

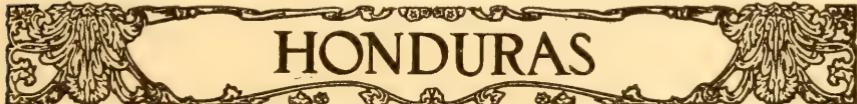
The Haitian Congress, during its last session, passed several bills which will tend to promote the agricultural and commercial development of the country. Owing to the crude methods hitherto employed in the Republic in the preparation of coffee, one of the leading products of the country, and which should be a source of great wealth to the nation, and to the lack of proper drying beds, Haitian coffee is not very highly rated at the present time in markets of the world. The same may be said of corn and rice. In order to remedy this condition, Congress decreed, on June 28, 1909, that the Government

should establish in each rural district producing coffee, rice, and corn one or more coffee grinding and decorticating mills, as well as rice and grist mills, to which the farmers may come and prepare their coffee, rice, and corn at no expense whatsoever, with the permission and under the protection of the chiefs of the districts, in order to give these products a marketable value. The Agricultural Department is allowed \$10,000 for this purpose and is responsible to the legislative body for the manner in which said sum is expended.

The following series of prizes are also to be awarded during the national agricultural celebrations: \$20 American gold to the owner of the best coffee-drying bed, \$20 American gold to the producer of a crop of 10,000 pounds of rice during the year, and \$20 American gold to the producer of 10,000 pounds of corn meal during the same period.

Another bill passed by Congress on the same date affords protection to commerce and industry by reducing the heavy duties levied on Campeachy logs and roots which exceeded the wholesale price of the product, thereby preventing its exportation. This bill provided for a reduction, beginning October 1, 1909, in the export duties on Campeachy logs and roots of one-half the former duties, or \$0.75 gold per thousand feet.

From the same date a duty of 10 cents American gold is levied on sugar and hides coming from abroad, and a duty of 2 cents American gold on the amount of the customs invoice of imported merchandise, with the exception of flour.



HONDURAS

MESSAGE OF THE PRESIDENT.

On January 1, 1910, President DÁVILA delivered an interesting message to the Federal Congress, in which he stated that the Government had done all within its power to strengthen the bonds of amity and cordial relations which Honduras maintains with other nations and those of Central America in particular.

Among the more important events of the previous year was the convention held by the First Central American Conference at Tegucigalpa, in January, 1909. The Executive congratulates Congress on the settlement of the question between the Governments of Guatemala and Salvador, and praises the consular service for its efficiency.

The Government is encouraging the spread of education, and to this end it recommends better salaries for teachers. A law school, a school of commerce, a national institute, and normal schools for both sexes are maintained, and the primary schools in 1909 numbered 655, with a corps of 767 teachers and 25,975 matriculates. Large sums of

money have been spent by the administration for public instruction, mainly in the form of salaries to primary school teachers. The Government intends to reestablish the school of medicine, putting it upon a firm financial basis, in order that it may recover as soon as possible the prestige which it formerly enjoyed.

In so far as able the General Government has lent aid to the municipalities in the furthering of public works, such as the construction of roads, streets, school buildings, and parks. Among the more important undertakings of this kind is the construction of a highway between Tegucigalpa and the Department of Olancho in order to make available to commerce the rich products of that district.

The budget for 1909 estimated the revenues of the nation at \$1,313,705. The actual receipts for the year were \$1,278,214, or a deficit of \$35,491.

The development of agriculture is being encouraged, and the establishment of agricultural schools is recommended, together with the improvement of transportation routes with a view to inducing the planters to produce products for the markets of the world.

With the construction of the railway line from Trujillo to Juticalpa there will be opened up for cultivation one of the most fertile districts of the country. As an evidence of the good effect this line will have in the encouragement of agriculture, it is only necessary to mention the numerous banana plantations in the vicinity of Trujillo.

The results accomplished by the School for the Cultivation of Tobacco in the short time of its existence have more than justified the hopes which lead to its establishment.

The Government has arranged with the Department of Agriculture of the United States to send a commission to Honduras to report on the cattle industry there. It is hoped the report of the commission will be favorable and so open up a larger market to that industry.

BUDGET FOR 1909-10.

The estimated receipts and expenditures of the Republic of Honduras for the fiscal year ending July 31, 1910, expressed in silver pesos of a gold value of $37\frac{1}{2}$ cents each, is shown in the following table:

Income.	Pesos.	Expenditures.	Pesos.
Import duties.....	1,800,000	Administration.....	719,690
Rum monopoly.....	1,300,000	Justice.....	173,684
Tobacco monopoly.....	300,000	Foreign relations.....	261,340
Stamped paper monopoly.....	220,000	Public instructions.....	466,668
Liquor monopoly.....	150,000	Agriculture.....	27,600
Export duties.....	142,500	Public works and fomento.....	594,370
Exportations.....	50,000	Army and navy.....	1,434,718
Wharf dues.....	55,000	Treasury.....	453,636
Telegrams and cablegrams.....	108,000	Public credit.....	582,359
All other sources.....	588,565		
Total.....	4,714,065	Total.....	4,714,065

FORFEITURE OF MINING CONCESSIONS.

The Government of Honduras has published a list of 97 mining concessions that have been declared forfeited, in accordance with the provisions of article 177 of the Mining Code, for failure to comply with the terms of the contract relating to the working of the mines. The forfeited claims consist principally of gold and silver mines and prospects situated in different parts of the Republic, but more especially in the great mining departments of Olancho, Yoro, and Tegucigalpa. The combined area of these properties, which up to the present time were largely held by one person, is about 50,000 hectares. The action of the Government has again opened up these mining claims to entry and exploitation. Many of the prospects are said to be very valuable, and numerous entries have already been made, and it is thought that a new impetus will be given the mining industry of Honduras because of the increased opportunities for entry, exploitation, and development of some of the richest and most promising mining zones of the country.

REPEAL OF RESTRICTIONS ON FOREIGN AND COASTWISE TRADE.

The law requiring the coastwise trade of the Republic to be carried on in vessels owned and registered in the Republic has been repealed, and this trade thrown open to the nations of the world without any restriction whatever. Formerly vessels coming to Honduras from foreign countries were required to have ship's papers signed by a consular officer of Honduras. This decree has also been repealed, and the trade of the country is now open to the vessels of all countries.

TARIFF MODIFICATIONS.

The decree of February 17, 1909, reducing the import duties on cotton goods 20 per cent has been repealed, and the law of April 7, 1900, which imposes a duty of 30 cents silver per kilogram gross weight on white shirting, 40 cents on drills, and 60 cents on prints and grays, or mantas, has been substituted therefor. The changes made in the tariff leaves the tariff of 1900 in force with the following exceptions:

The duty on liquors has been increased 50 per cent; candles have been reduced to 10 cents silver per half kilogram; fence wire has been put on the free list; Scott's Emulsion has been reduced to 15 cents silver per half kilogram; and paper used for printing is admitted free. There have also been a number of changes in the classification of certain articles such as drugs, medicines, etc.



MEXICO

INCREASING COMMERCE IN THE UNITED STATES OF THREE MEXICAN PRODUCTS.

The Mexican Consul at San Antonio, Texas, in a report made recently to the Department of Fomento in the City of Mexico, shows that during the fiscal year 1908-9, a single establishment in San Antonio imported common straw hats from Mexico to the value of \$85,000, and that the demand was so great for this article that it is probable that the imports of same will be doubled during the next fiscal year. The hats in question came principally from Tehuantepec, Leon, Puebla, and the Federal District.

Another Mexican product for which there was a considerable demand was red pepper, the delicate flavor and excellent quality of which caused it to be preferred to any other pepper by thousands of Americans. The value of the imports of red pepper through the custom-house at San Antonio during the last fiscal year amounted to \$79,840. Mexican nuts are also highly esteemed in the United States, and \$34,080 worth of these were imported through San Antonio during the period referred to.

The plant (*Pedilanthus Pavona, Euphorbiaceae*) from which the substance known as *candelilla* is extracted, grows in abundance in northern Mexico, where the yield is from one-half to 2 tons of candelilla per hectare. This substance ranks among the best vegetable wax, and is used in the manufacture of candles, varnishes, disks, and electric insulators. The price of the substance varies from 44 to 56 cents per kilogram, and the demand for it, both in the United States and Europe, is increasing constantly.

STEAMSHIP COMMUNICATION BETWEEN CANADA AND MEXICAN PORTS.

The Mexican Government has contracted with ELDER, DEMPSTER & Co. for a steamship service, consisting of one or more trips per month, between Tampico, Veracruz, and Progreso, Mexico, and Montreal and Charlottetown, Canada, and Halifax, Nova Scotia. The service is to be commenced at once, and connection will be made in Canada with European lines. With the permission of the Mexican Government, the vessels of the new line may touch at other foreign ports. The ships employed in the service are to sail under the English flag, and none of them are to be less than 3,000 tons burden.

NATURAL RESOURCES OF CHIHUAHUA.

In 1907 Chihuahua produced mineral products to the amount of \$11,779,455, and timber and agricultural products valued at \$5,688,-580. During the same year there were 621,953 acres of unirrigated and 458,085 acres of irrigated land in the State under cultivation, and 14,826,000 acres of good farming land entirely uncultivated. The agricultural industry of the State gave employment during that year to 44,732 men and 379 women.

Numerous fruits are grown in the State, the total value of the fruit and vegetable crop in 1907 amounting to \$271,500. Railroads are being built into the remote sections of the State, and the forests of the Sierra Madre Mountains have become of great value. Long-leaf yellow pine is found in abundance, and other important woods are live oak, poplar, mesquite, and ash. The value of wood products in 1907 was \$1,700,000.

TEZIUTLAN TO NAUTLA RAILWAY.

A company has been organized to build a line from Teziutlan, State of Puebla, to the port of Nautla, in the State of Veracruz. The company has a subscribed capital of \$2,500,000. The line will traverse a region rich in fruits, sugar cane, oil, and tropical products. Teziutlan, the interior terminus of the proposed line, is a great copper and smelting center, and is a rich mineral and agricultural district. The plan contemplates the building of a branch line between Papantla and Misantla.

NATIONAL BOARDS OF AGRICULTURE.

A law of December 21, 1909, provides for the establishment of national boards of agriculture, whose object is to develop agriculture, and especially stock raising, forestry, and other related industries. These boards will encourage the holding of expositions of agriculture, and will keep in touch with domestic and foreign boards of the same class. One feature of the work of these boards will be the publication of reports for the information and instruction of agriculturists, the awarding of prizes for treatises on agriculture, the establishment of agricultural schools, and the creating of scholarships to aid in the study of agriculture.

CONCESSION FOR RAILWAY IN SONORA.

The Mexican Government has granted a concession for the construction of a railway from Port Lobos, on the Gulf of California, to Sasabe, on the boundary line with the United States. No other railway shall be constructed within a zone of 29 miles wide covering the

entire length of the line, and including Port Libertad. Twenty miles of track must be completed by April 26, 1911. The railway will penetrate the district of Altar, which is rich in low grade ores.

CANALIZATION OF THE NAZAS RIVER.

The Mexican Government has decided to canalize the Nazas River from its source to a point just below the city of Torreon, in the State of Coahuila, and to erect large dams at convenient points along its course. The total cost of these improvements will aggregate ₡15,000,000 (\$7,500,000). A large quantity of cement will be used in the construction of the canals and conduits, and precautions will be taken to prevent the loss of water by leaks and seepage through porous soil. Plans have been submitted to the Government, and the contracts for effecting the work will be let in due time.

NEW GAS PLANT FOR THE CITY OF MEXICO.

The plant of the Mexican National Gas Company, now under construction, will be completed in the spring of the present year and ready to furnish gas to the City of Mexico. The plant, which is situated near the city limits of the federal capital, covers an area of 3 acres. The main building is to be of steel, 80 feet long by 60 feet wide, and will be 50 feet high. Gas will be manufactured from crude oil, such as is used in locomotives, and tanks will be erected to store 8,000 barrels of oil, which will be piped from Huasteca. The production of the plant is a million cubic feet of gas per day, and the storage capacity of the gas plant which is being built is 500,000 cubic meters.

CONCESSIONS FOR CONSTRUCTION OF A TRAMWAY AND A RAILWAY.

A concession has been granted to ARTURO MORALES for the construction and exploitation for a period of ninety-nine years of a street railway in the State of Sonora, extending for a distance of 1 kilometer opposite the town of Douglas, Arizona, with the privilege of building an additional 4 kilometers to Agua Prieta. The first kilometer of the line is to be completed within a period of two years. A charge of 10 centavos will be made for the transportation of adult passengers.

The Mexican Government has also granted a concession to ALBERTO LEGARRETA to construct and exploit for the same period of time a railroad between the cities of Queretaro and Guanajuato, starting at a point between the city of Queretaro and Griega and terminating at San Jose de Iturbide, in the State of Guanajuato.

Both these concessions carry with them the right to import free of duty the material necessary for the construction of the roads.

PROPOSED ELECTRIC POWER PLANT AND CANAL CONSTRUCTION.

The Chapala Hydro-Electric and Irrigation Company, whose headquarters are in the City of Mexico, proposes to transmit electric power from the Santiago River in the State of Jalisco to the Aguascalientes district near the city of Guadalajara. The plan embraces the building of a canal to Las Juntas, where the power plant will be erected, the Santiago River being tapped near the Juanacatlan Falls, about 16 miles distant. It is estimated that the water of the canal at the point mentioned is sufficient to generate about 90,000 horsepower.

CHAMELA TO GUADALAJARA RAILWAY.

A syndicate has been formed to build a railway in the State of Jalisco from Chamela, a port on the Pacific Ocean, to Guadalajara, the capital of said State. The road will run from Chamela to La Vega, 43 miles from the city of Guadalajara. At La Vega it will connect with the Ameca line of the National Railways. The main line will be about 200 miles long and the Ayutla branch about 16 miles long. The construction of this railway was planned to commence during the early part of the present year and to be pushed forward to completion as rapidly as possible.

NATIONAL BOARD OF COMMERCE, TAMPICO.

The by-laws of the National Board of Commerce of Tampico, State of Tamaulipas, Mexico, which board was established in accordance with the law of June 12, 1908, were approved by the Department of Finance and Public Credit on December 15, 1909, at which time the board became a legal entity.

CATTLE SHIPMENTS FROM CHIHUAHUA.

During the first eleven months of 1909, 90,981 head of cattle were exported from the State of Chihuahua to the United States. The total for last year was 86,000. It is estimated that 12,000 head of cattle was exported to the United States via El Paso during the month of December. Early in the year the State government approximated the number of range cattle in the State as 947,000.

EARNINGS MEXICAN RAILWAY.

The earnings of the Mexican Railway for the first six months of the fiscal year 1909-10 were ₡1,737,773 (\$868,886), or a gain of ₡215,034 (\$107,517) compared with the first half of the previous year.

NICARAGUA

NEW ISSUE OF PAPER CURRENCY.

The vice-consul of the United States at Managua states that, according to a recent executive decree, paper currency is to be issued in Nicaragua to the amount of \$2,000,000. The issue is to be in bills of \$50 denomination.

NEW STEAMSHIP LINE BETWEEN BLUEFIELDS AND NEW ORLEANS.

The Nicaragua Fruit Company, a company organized in New Orleans with a capital of \$100,000, has inaugurated a regular weekly

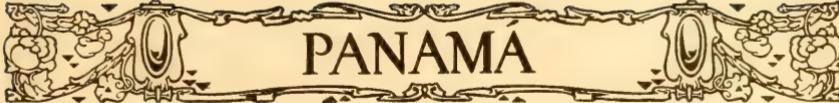
steamship service between New Orleans and Bluefields. For the present, two steamers, the *Hiram* and the *Senator*, will be made use of, and as soon as conditions and traffic justify another steamer will be added to the service.

The company proposes to handle bananas, cocoanuts, pineapples, limes, oranges, plantains, and all kinds of fruits that are salable in New Orleans. Corn Island will be visited each month in the interest of the cocoanut trade. The company contemplates putting in its own loading plant,

MAP SHOWING ROUTE OF NEW STEAMSHIP LINE INAUGURATED BETWEEN NEW ORLEANS, LOUISIANA, AND BLUEFIELDS, NICARAGUA.

and in that case will become a large employer of labor.

The men engaged in the operation of the new company are said to be men of means and experience, and the prospects that the new line has for obtaining a fair share of the carrying trade between the points mentioned are exceedingly good.



PANAMÁ

CORAL, SPONGE, AND MARINE ALGAE FISHING.

In 1900, with the object of producing a revenue, fishing for coral, sponges, and marine algæ in the Atlantic and Pacific oceans off the coast of Panama, then a State of Colombia, was made a monopoly of the Government in accordance with the provisions of legislative decree No. 233. Since that time many persons have solicited governmental permission to fish for sponges off the coasts of Santa Isabel and San Blas. These petitions were carefully considered by the authorities, and on October 29, 1909, a legislative decree was passed by the Congress of Panama regulating these fisheries and permitting the issuance of licenses to individuals and companies for the exploitation of the same, on the payment of \$2.50 per month in advance. Under this law the Government may, whenever it deems expedient, lease for a term of one year by public auction to the highest bidder the privilege of fishing in certain localities for said marine substances. The Secretary of the Treasury, and the collectors of customs at Colon and Bocas del Toro, are authorized to issue licenses and monthly permits for coral, sponge, and marine algæ fishing in waters embraced within their respective jurisdictions.

CONDITION OF TREASURY, SEPTEMBER, 1909.

On September 30, 1909, the assets of the Republic of Panama consisted of interest-bearing securities and cash deposits in New York to the amount of \$7,112,042.73. Against this sum drafts aggregating \$46,764.81 were drawn in September of said year by the Treasurer of Panama to meet the authorized expenses of the Government during the month referred to.



PARAGUAY

COMMERCE IN 1908.

The exports of Paraguay in 1908 were valued at £773,419, as compared with £647,222 in 1907, or an increase in 1908 of £126,197. The chief exports were hides, quebracho, wood, oranges, and tobacco.

The value of the imports fell from £1,502,500 in 1907 to £814,591 in 1908. The principal decrease was on imports of liquors, textiles,

foodstuffs, and fancy goods. The countries from which imports were made were, in the order of their importance, Germany, with 29 per cent; Great Britain, 21 per cent; Argentine Republic, 10 per cent, and the United States and Spain, each 5 per cent.

The customs revenues declined from £458,919 in 1907 to £108,408 in 1908.

FREE ENTRY OF TELEPHONIC MATERIAL.

According to a legislative decree of October 25, 1909, which has been duly promulgated by the President of the Republic, the National Telephone Company has been granted the privilege of importing free of duties, the machinery and supplies necessary for the conservation and extension of its telephone line. The decree also frees the company from federal and municipal taxes, and authorizes it to erect such posts in the municipalities through which its wires pass as may be needed for the stringing of its lines. The federal and municipal governments of the Republic enjoy a reduction of 20 per cent on the tariff rates charged other customers. These concessions are valid for a period of ten years.

CUSTOMS TARIFF.

The new customs tariff which went into effect on October 1, 1909, was recommended by the Department of Customs of Paraguay, and consists of 18 divisions divided into 3,760 sections. The present tariff repeals the previous one, together with all decrees and resolutions concerning the same.

SPECIAL SESSION OF CONGRESS.

The special session of Congress which met on November 5, 1909, adjourned on the 30th of the same month.



DREDGING FOR GOLD ON THE INAMBARI RIVER.

In December, 1908, a company working under a Government concession was formed in England to dredge for gold on the Inambari River and its tributaries. The first dredge employed by this company was erected too far upstream, and its operation proved unsuccessful. An attempt to float the dredge 40 kilometers down the river, to a point which seemed more appropriate for the profitable operation of the same, resulted disastrously, and the dredge was wrecked and lost in one of the turbulent rapids of the stream. A modern steel dredge,

with a capacity of 1,200 to 1,500 cubic meters of gravel per day, was then ordered from Scotland. This dredge was shipped knocked down to Mollendo, and from thence transported by rail and overland to the point of destination.

The carrying of a large steel dredge over the precipitous mountain passes was a feat of great difficulty, and old trails had to be enlarged in places and new ones constructed before it was possible to haul the machinery to the point where it was to be set up. To assist in the land transportaion, Arabian carts were imported from Tunez, and the greatest care had to be used in lugging the heavy steel parts of the dredge to the selected gravel bed where the gold-bearing sands are known to exist in considerable quantities. When the dredge is in place and commences to operate, there is every reason to expect that large quantities of gold will be extracted from the auriferous sands of the Inambari River, a stream that is thought to have been the source of supply of the ancient Inca rulers.

FOREIGN LOAN.

The Government of Peru, acting under authority conferred upon it by law No. 1082 of August 21, 1908, has contracted with La Banque de Paris et des Pays Bas for a nominal loan of £1,200,000, to be represented by 60,000 bonds of £20 each, payable to bearer. The bonds will bear interest, payable semiannually in London or Paris, at the rate of $5\frac{1}{2}$ per cent per annum.

This loan is to be liquidated in twenty-eight and one-half years by payments made semiannually in January and July of each year, the bonds paid to be selected by lot, the first drawing to take place in July of the present year. The bonds will be paid in London or Paris and in pounds sterling or francs, at the option of the holder. The Government of Peru will draw drafts at ninety days sight on Paris or London for the amount of the loan and in accordance with the conditions of the contract.

PURCHASE OF TOBACCO BY THE GOVERNMENT.

According to an executive decree of November 26, 1909, issued in conformity with the law that confers upon the State the monopoly of tobacco, the Government will buy all the unmanufactured or leaf tobacco, both domestic and foreign, on hand in the custom-houses and tobacco factories of the Republic, as well as the tobacco in transit, paying for the same a just price to be fixed by the Government. Should questions arise concerning the price to be paid, they are to be settled in accordance with the provisions of article 2 of the decree of July 3, 1909.

**DECREE PROHIBITING GOVERNMENT OFFICIALS FROM CONTRACT-
ING LABORERS.**

President LEGUIA issued on November 23, 1909, an important decree prohibiting the intervention of officials of the Government in contracting in any way whatever the services of laborers or workmen for public or private works. The infraction of this law is punishable by a year's imprisonment.

OFFICIAL REGISTRY OF MARKS AND BRANDS.

An official registry for recording the marks and brands of cattle has been established in the Bureau of Agriculture of the Department of Fomento, with the object of rendering more difficult the theft of cattle. Public slaughterhouses must keep a record of the marks and brands of the animals killed in their respective establishments.

IMPORTATION OF LIVE STOCK.

An executive decree of December 3, 1909, prescribes that persons desiring to import cattle, horses, and other live animals into Peru must satisfy the authorities in the port of disembarkation that the stock is free from contagious diseases. A certificate from the proper authorities of the country in which the stock originates, viséed by a Peruvian consular officer, certifying that the stock desired to be imported is free from disease, must also accompany the shipment.

NEW STEAMSHIP LINE BETWEEN PANAMA AND CALLAO.

In January of the present year the Peruvian Steamship Company established a new direct line of steamers from Callao, Peru, to Panama. The *Ucayli*, the first steamer to arrive, is an 18-knot turbine steamer with all modern improvements. Three other steamers are to be put on this run. The ships are scheduled to make the trip from Callao to Panama in five days, and the fare will be £27, £18, and £9, first, second, and third class, respectively. The new line will reduce the rates between Panama and Callao.



COMMERCE, FIRST HALF OF 1909.

The imports of the Republic of Salvador during the first half of 1909 amounted to C2,255,044, equivalent to \$845,631 United States gold, and exports during the same period are valued at C11,608,470, equivalent to \$4,353,176 United States gold.

The leading articles of import were: Cotton manufactured goods, \$358,050; flour, \$49,561; hardware, \$42,531; drugs and medicine, \$37,986; boots and shoes, \$32,596; silk fabrics, \$24,153.

The principal countries of origin of the imports to the Republic were: Great Britain, \$290,773; United States, \$270,657; Germany, \$97,874; Italy, \$33,655; Belgium, \$20,600; Japan, \$12,648.

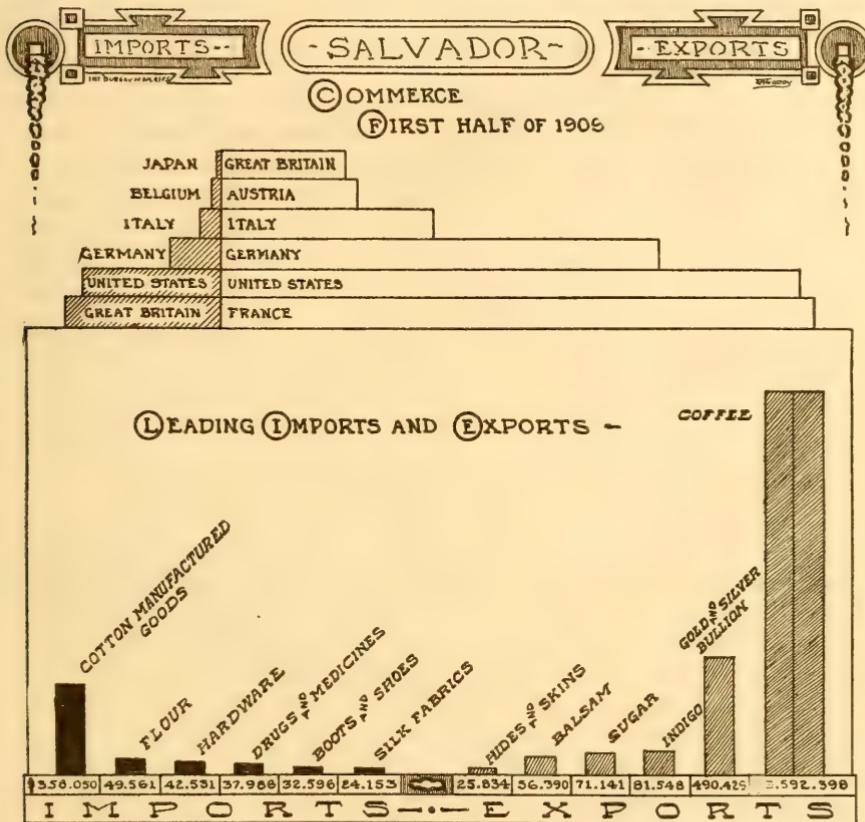


DIAGRAM SHOWING VALUE OF THE LEADING IMPORTS AND EXPORTS OF SALVADOR FOR THE FIRST HALF OF 1900.

Exports in the order of their importance were: Coffee, \$3,592,398; gold and silver bullion, \$490,429; sugar, \$71,141; balsam, \$56,390; indigo, \$81,548; hides and skins, \$25,834.

The countries of destination for exports, in the order of their importance, were: France, \$1,123,726; United States, \$1,105,699; Germany, \$829,643; Italy, \$386,488; Austria, \$272,386; Great Britain, \$261,048.

SECOND CENTRAL AMERICAN CONFERENCE.

On December 20, 1907, the Central American Peace Conference held in Washington, concluded a convention providing for meetings of Central American conferences to be convened on January 1 of each year for a period of five years, with the object of agreeing upon the most efficient and proper means of bringing uniformity into the economical and fiscal interests of the Central American States. The Peace Conference designated Tegucigalpa, Honduras, as the place of the first meeting of the Central American Conference, and prescribed that the Conference should choose the place for the holding of the next Conference, and so on successively until the expiration of the convention concerning future Central American conferences. The First Central American Conference, which met in Honduras on January 1, 1909, selected San Salvador, the capital of the Republic of Salvador, as the place for holding the Second Central American Conference, on January 1, 1910. For unavoidable reasons the members of the Conference could not meet in San Salvador on the date prescribed, and the President of the Republic of Salvador, acting in conformity with Article II of the aforesaid Convention of the Peace Conference, postponed the meeting of the Second Central American Conference until February 1 of the present year, which met on that date and concluded its work on the 5th of the same month.

The results obtained by the Conference were the celebration of six conventions, all of which were signed on the 5th of February last. The first of these conventions provides for the establishment in Costa Rica of a pedagogic institute for Central America; the second for the unification of the consular service abroad of the five republics; the third provides for monetary uniformity on a gold basis; the fourth for Central American commercial reciprocity; the fifth for the adoption of the metric system of weights and measures, and the sixth defines the functions of each government toward the Central American bureaus in Guatemala.

USE OF FOWLS IN THE CULTIVATION OF TOBACCO.

In some sections of Salvador tobacco growers have resorted to an ingenious method of ridding the tobacco leaves of destructive insects and worms that feed upon the tender young plants at certain periods of their development. A kind of fowl known locally by the name of "chompipe," which was brought from the West Indies and is capable of being domesticated, is kept in flocks of considerable size in the vicinity of the tobacco fields, and at certain hours of the day is driven through the fields in order to rid the tobacco plants of worms and insects. These fowls do their work so well that the smallest insect fails to escape them, and with such care that the tender leaves remain

free from injury. Without the use of these fowls, laborers must be employed to go through the fields as stated intervals to pick the insects and worms off the leaves, and this method, aside from being tedious and unsatisfactory, often damages the leaves through rough handling, causing defective development and a reduction of their value as a marketable product.

ENTRANCE AND CLEARANCE OF VESSELS FIRST NINE MONTHS OF 1909.

During the first nine months of 1909, 463 steamers and 89 sailing vessels, having a capacity of 888,978 tons, entered the ports of Acajutla, La Libertad, La Union, and El Triunfo. Of these vessels 245 were North American, 153 German, 79 Salvadorean, 74 Honduranean, and one Costa Rican. The North American vessels represented a capacity of 476,945 tons, and the German 411,229 tons.

MAIL HANDLED IN 1909.

The number of pieces of mail matter handled in Salvador in 1909, consisting of letters, postal cards, printed matter, parcels, and samples, was 1,489,120, as compared with 1,199,154 pieces in 1908.

DEMOGRAPHIC STATISTICS FOR 1908.

The Diario Oficial of December 16, 1909, publishes statistics showing that in 1908 the number of births in the Republic aggregated 47,651, and the number of deaths 24,691, an increase of births over deaths of 22,960. The total population of the Republic at the close of 1908 is given as 1,143,624.



PROMOTION OF AGRICULTURE AND COLONIZATION.

The Diario Oficial of December 12, 1909, publishes the full text of the President's message to Congress relative to the promotion of agriculture and colonization. The more important provisions of the bill may be summarized as follows:

Owners of camp land of an area exceeding 300 hectares (741 acres) who present proof that they have had 5 per cent of the total area under cultivation from the next fiscal year are to be exempted from half the property tax corresponding to the area cultivated, but must pay the usual tax on the remainder.

Proprietors of more than 300 hectares who do not give proof of having cultivated 5 per cent of their land must pay on the whole area double the ordinary tax.

Proprietors who prove that their land, even in 5 per cent of its area, is not suitable for cultivation, are exempt from the surcharge.

The Executive is authorized to expend \$20,000 of the general revenue to promote and aid the formation of agricultural syndicates.

The Executive is further empowered to use \$10,000 for the teaching of scientific farming by means of lectures in the various governmental departments.

It is thought that this bill with its well-balanced provision of reward and penalty, will double the acreage of cultivated lands in the Republic.

EXHIBIT OF PORTUGUESE PRODUCTS.

The consul of Portugal at Montevideo has installed in that city an interesting exhibit of Portuguese products and manufactures, the most important item of which consists of about 30 different classes of wine, complemented by a fine display of silk fabrics, pottery, porcelain, statues and garden ornaments, toys, umbrellas, school furniture, wall paper, building material, perfumes, toothpicks, writing ink, printing, hats, hardware and tinware, thread and woolen goods, shoes, and shirts.

FOREIGN LUMBER.

A recent report of the United States consul at Montevideo shows that nearly all the timber used in Uruguay is imported. The walnut employed in the local manufacture of furniture comes in considerable quantities from southern Europe and the United States, while shipments of pine and other lumber are received from Argentina, Brazil, Paraguay, and the United States, the imports of the latter country, consisting chiefly of white and yellow pine and spruce, greatly exceeding the combined imports from all other countries. The moldings imported into the Republic come from Belgium, England, and France. The imports of lumber from the United States are increasing in quantity yearly, and now form a trade of considerable volume.

PAN-AMERICAN RAILWAY SYSTEM.

The Southern Railways of Brazil have come under the control of a Belgian syndicate, which is cooperating with the Interior of Uruguay Railway now under construction. When the different links of this system are completed, it has been estimated that it will be possible to go from New York to Pernambuco, Brazil, thence by rail through Brazil, Uruguay, and Argentina to Valparaiso, Chile, in about twelve days.

PROPOSED AMENDMENT TO THE PHARMACY BILL.

The press of Montevideo announces that the legislative committee of the House of Representatives has adopted an amendment permitting nonpharmacists to be partners or coproprietors in the operation and management of pharmacies. The amendment will also probably regulate the transferability of proprietorship in pharmacies.



SALT MONOPOLY.

The Government of Venezuela has leased the administration of the salt monopoly for a period of two years from December 13, 1909, with the privilege of extending the contract two years longer to the Fluvial and Coastwise Navigation Company of Venezuela. The contractors agree to pay to the Government for the first year \$723,750, for the second year \$772,000, for the third year \$820,250, and for the fourth year \$865,500. Payments are to be made monthly, and unpaid installments are to bear interest at the rate of 1 per cent per annum. The Government reserves the right to lower the rental \$48,250 in any year that it may deem desirable, in which case the price of salt is to be reduced $6\frac{1}{4}$ per cent.

Shipments for the curing of meats and hides for export are entitled to a reduction of 75 per cent from the scheduled prices. The manufacture or importation of salt is prohibited during the life of the contract. Venezuelan laborers are to be employed in the exploitation of the salt mines, and whenever possible Venezuelan vessels are to be used in the transportation of the product.

The company is exempt from the payment of federal and municipal taxes, enjoys reduced harbor, dock, and railway charges, and may import machinery and sacks for its own use without the payment of duty. Should it be necessary for the company to construct piers and portable railways, the Government will bear 40 per cent of the cost of construction.

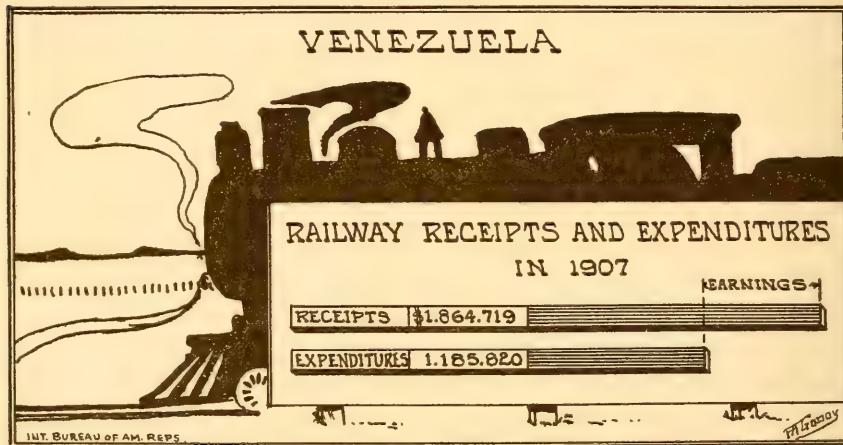
FIBER CONCESSION.

The Government of Venezuela has granted a concession for the exploitation of the fibers of the country and the establishment of the fiber industry in the Republic. Modern machinery is to be installed at different points for the treatment of the sisal, agave, and other similar fibers. The concession, which is for a period of ten years, is exempt from federal and municipal taxes. The concessionaire has the right to import free of duty such machinery, apparatus, and utensils as may be necessary for the installation of the different plants, one of which has already been established in the State of Falcon.

RAILWAY RECEIPTS AND EXPENDITURES IN 1907.

A report of the Minister of Fomento to the Federal Congress in 1909 shows that the receipts and expenditures of the Venezuelan railways in 1907 were \$1,864,719 and \$1,185,820, respectively, or net earnings during that year of \$678,899. The following is a statement in detail of the receipts and expenditures referred to:

Railways.	Income from—		Railways.	Income from—		Expendi- tures.	
	Passen- gers.	Freight.		Passen- gers.	Freight.		
La Guaira and Ca- racas.....	\$82,908	\$306,979	\$199,736	Del Tachiro.....	\$5,389	\$280,609	\$138,757
Gran Ferrocarril Venezuela.....	124,697	274,212	275,628	De La Ceiba.....	4,405	147,846	77,766
Ferrocarril Cen- tral.....	19,315	24,419	39,845	De Carenero.....	6,411	39,729	54,874
Maiquetia and Macuto.....	10,077	172	11,698	De Coro and La Vela.....	1,298	7,912	9,474
Puerto Cabello and Valencia.....	21,165	123,191	138,568	Bolivar.....	10,266	364,119	229,351
			De Quanto.....	2,336	7,264	9,698	
			Total.....	288,267	1,576,452	1,185,820	



PETROLEUM CONCESSION.

On December 13, 1909, the Government of Venezuela entered into a contract with London representatives of the Venezuela Development Company, conceding valuable petroleum rights in Venezuela.

Among the privileges conceded is that of exploring for petroleum, ozocerite or mineral wax, and similar substances with geologists and expert mining engineers in certain States in which the rights of exploitation have not been granted under previous contracts.

The work of exploration must be commenced within six months from the date of the contract and completed within eighteen months thereafter. The concessionaires are to deposit 50,000 bolivars (\$9,850 United States currency) in some bank of the country as guaranty.

The concessionaires are granted the right to exploit, refine, and export their products, crude or refined, subject to the payment of

certain imposts and taxes specifically agreed upon, the right of expropriation of private lands for erection of buildings and transportation routes, the right of free importation of machinery necessary for carrying on the company's business, the right to navigate the waters of Venezuela, establish piers, docks, pipe lines, and telephones, and in general such ways of communication as are necessary for business purposes.

The Government reserves the concession rights in such asphalt as the concessionaires may discover. The contract requires the company to be domiciled in Venezuela.

IMPORTS OF COAL THROUGH LA GUAIRA.

During the first half of 1909 the imports of coal through La Guaira, Venezuela, amounted to 5,456 tons, valued at \$22,751, nearly all of which came from England. No custom duties are charged on coal, but port and wharfage charges have to be paid. The total quantity of coal imported through La Guaira in 1907 amounted to 8,977 tons.

IMPROVEMENTS IN ELECTRIC LIGHTING.

The electric lights of the city of Caracas are supplied from two plants, in one of which, the Junin, 200 horsepower is developed from gasoline motors, and 1,000 horsepower is taken from the plant at Encantado, distant 9.6 miles. The electric-light plant Junin is equipped with modern American machinery, while the machinery in the Paraiso plant is from Germany. A new plant to develop 1,000 horsepower is being put in about 2 miles below Los Naranjos on the Guaire River. The power company makes use of the waterfalls on the Guaire and intends to make extensions in its plant in the near future.

PROCEDURE FOR THE INTRODUCTION OF PATENT MEDICINES.

The introduction of patent and proprietary medicines into Venezuela requires the sending, either direct or through a representative at Caracas, of two samples of same, accompanied by a description containing the formula and specifying the dose, to the Board of Examination and Classification of Secret and Patent Medicines in the capital of the Republic. The board charges 20 bolivars (\$3.86) for making the examination and issuing the permit to introduce the medicine, if such permit is granted. When these requisites are complied with, the articles may be advertised without restriction.

TELEPHONE AND TELEGRAPH SERVICE.

According to the report of the Director-General of Telegraphs there were, December 31, 1908, 7,654 kilometers, or 4,756 miles, of telegraph lines in the Venezuelan systems, with 169 offices. The income from the government telegraph lines was \$63,227 for the year 1907 and \$64,100 for the year 1908. The government telephone system comprises 212 telephones.

SANITARY AND QUARANTINE CHARGES.

The following schedule of charges for sanitary and quarantine service at the ports of the Republic have been approved by the Minister of the Interior:

Medical visit to vessels plying between Antillian ports, steam, \$5; sailing, \$4; small, \$2. To vessels from the United States or European ports, steam, \$10; sailing, \$5.

Quarantine charges for vessels isolated, \$0.004 per ton per day.

Detention of passengers in quarantine, first class, \$2 per day; second class, \$1 per day; third class, \$0.50 per day.

For disinfection of an infected ship, from 250 to 2,000 tons, \$0.014 per ton.

NEW TELEGRAPH LINE TO COLOMBIA AND BRAZIL.

The Government of Venezuela proposes to construct a telegraph line through the country south of the Orinoco River to San Fernando de Atabapo, on the headwaters of the Manoas River, near the borders of Colombia and Brazil. If possible, connection will be made with the Brazilian system, and by agreement with the Brazilian and other governments an international Latin-American system of telegraphs will be formed.

APPOINTMENT OF ARBITRATOR TO THE HAGUE.

The Venezuelan Government has appointed A. BEERNAERT, Belgium Minister of State, to represent it at The Hague Tribunal in the arbitration of American claims. Mr. BEERNAERT succeeds Dr. ROQUE SAENZ PEÑA, of the Argentine Republic, who resigned some time ago. The arbitrator representing the United States is GONZALO DE QUESADA, recently appointed Cuban Minister in Berlin near the Government of Germany.

MODIFICATION OF TARIFF DUTIES.

From December 8, 1909, in accordance with an executive decree, the permits issued by the Minister of War and Marine for the importation of shotguns, saloon rifles, and pistols, revolvers, hunting powder, cartridges and caps, empty shells for the above-named sporting arms, and also saltpeter, lead in sheets and elaborated, are suspended. There are excepted from this order the following: Dynamite, fuse and caps for same, and any other arms or explosives not specified herein, may be imported by special permit from the War Department.

Cascaras de Almendras, "almond bark" or "almond shells," will pay duty of 0.10 bolivar plus 55 per cent per kilo. (Bolivar, \$0.193.)

Ramie fiber or horsehair, proper only for adornment in the manufacture of hats, will bear duty at the rate of bolivars 5.00, plus the surcharge of 55 per cent.

